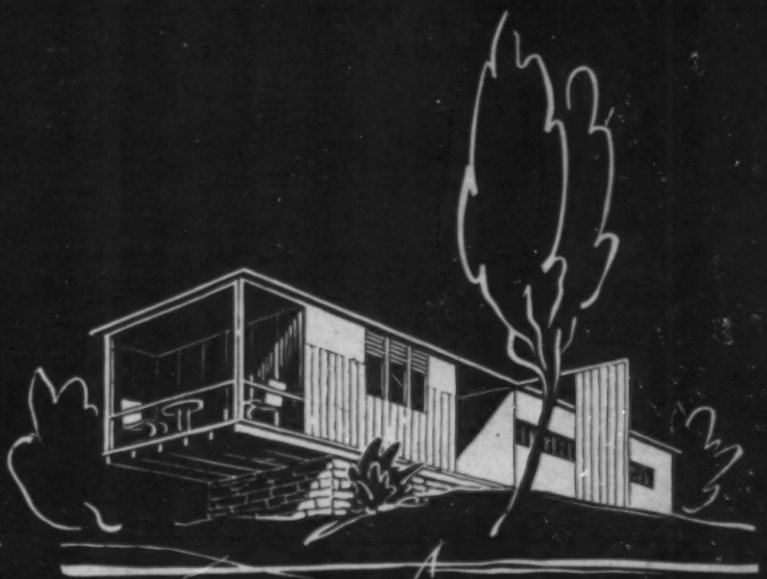
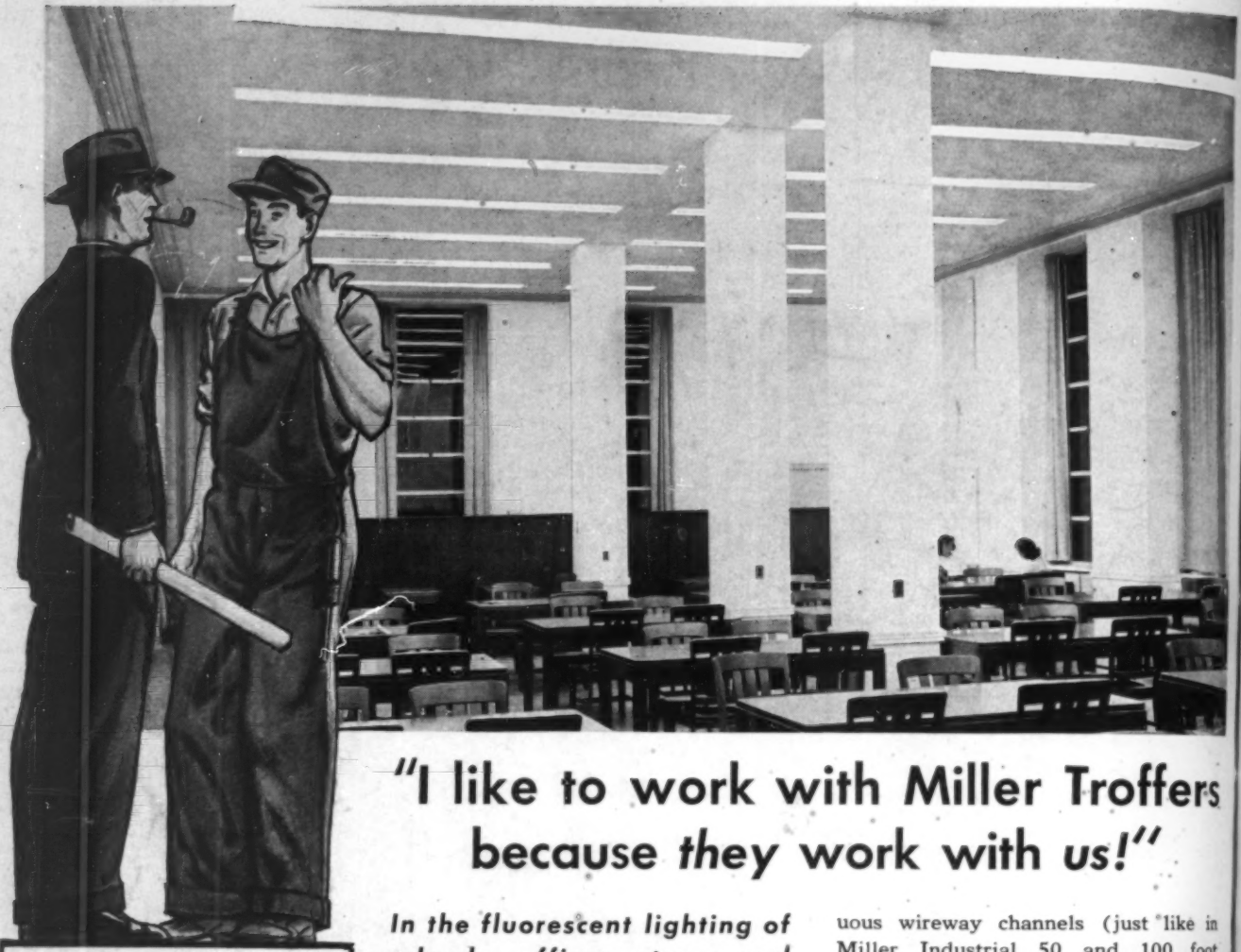
ARCHITECTURAL RECORD

JAN 2 1945



DECEMBER 1944

THE POSTWAR HOUSE



"I like to work with Miller Troffers because *they* work with *us!*"

In the fluorescent lighting of schools, offices, stores and industry . . .

new lighting systems need not present new planning problems nor new construction problems. In fact, the Miller 2-lamp 40-watt Fluorescent Troffer not only avoids *new* problems—but ingeniously solves a few *old* ones!

ARCHITECTS SAY that Miller Troffers in single units, combinations of units, or in continuous light-strips "by the mile" present almost unlimited application possibilities. The wide range of plastic and glass dishes, ribbed or fluted—and prismatic glass plates—and grills of metal or plastic—harmonize with almost any type interior.

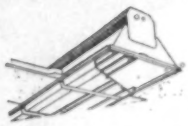
BUILDERS AND CONTRACTORS SAY that exclusive Miller features such as continuous wireway channels (just like in Miller Industrial 50 and 100 foot Candlers), patented brackets and other improvements developed during Miller's 100 years of pioneering make this the most practicable and economical fixture with which to work.

USERS of Miller Troffers say they are amazingly simple to service—and so economical to operate that completely new standards of illumination can be enjoyed.

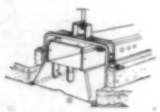
THE MILLER COMPANY SAYS: "We think we've got the best dawgone fluorescent lighting systems in the world—and because we work with all light sources (including mercury-vapor and incandescent), we don't think we're particularly biased."

So call in a Miller Engineer—they're in principal cities — and see why we're starting our *second* 100 years so chock-full of confidence!

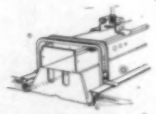
How they work:



Miller Troffer recessed in either plaster or acoustic tile ceiling.



Patented Miller Bracket for attaching to structural ceiling, allowing false wood ceiling to be hung *from the fixture.*



Patented Miller Bracket for attaching to structural ceiling, allowing false metal ceiling to be hung *from the fixture.*

THE MILLER COMPANY • MERIDEN, CONNECTICUT

ILLUMINATING DIVISION
Fluorescent, Incandescent
Mercury Lighting Equipment

OIL GOODS DIVISION
Domestic Oil Burners
and Liquid Fuel Devices

ROLLING MILL DIVISION
Phosphor Bronze and Brass
in Sheets, Strips and Rolls

WAR CONTRACTS DIVISION
War Materiel

MILLER
SINCE 1844

ARCHITECTURAL RECORD (Vol. 96, No. 6, December 1944) is published monthly by F. W. Dodge Corp., 34 No. Crystal St., East Stroudsburg, Pa., with editorial and executive offices at 119 W. 40th St., New York 18, N. Y. $3 per year; Foreign, $5. Entered as second class matter, May 27, 1942, at the Post Office, East Stroudsburg, Pa., under the Act of March 3, 1879.

ARCHITECTURAL RECORD

COMBINED WITH AMERICAN ARCHITECT AND ARCHITECTURE

VOL. 96 **DECEMBER • 1944** NO. 6

PROGRESS REPORT—THE EVOLUTION OF MIRACLES 57
An Editorial . . . by Kenneth K. Stowell

PRODUCTS FOR POSTWAR PLANS 58
Statements from 255 Manufacturers

HOUSE OF IDEAS FOR SEASIDE LIVING 68
Paul Thiry, Architect

EXPANSIBLE PREFAB HOUSE FOR POSTWAR 69
Walter Gropius, Architect

THREE HOUSES FOR THE POSTWAR WORLD 70
George Fred Keck, Architect

THREE POSTWAR HOUSES FOR ARIZONA 72
Arthur T. Brown, Architect
1. Proposed Residence for Mr. and Mrs. J. W. McCutcheon
2. Proposed Residence for Mr. and Mrs. C. J. Hall
3. Proposed Residence for Mr. and Mrs. Malcolm G. Munn

FOR OUTDOOR LIVING ON A SLOPING SITE 74
Residence for Mr. and Mrs. T. C. Ingersoll, Orinda, Cal.
Frederick L. R. Confer, Architect

INDOOR-OUTDOOR EXTENSIBLE LIVING AREA 76
Residence for Mr. and Mrs. James Ward, North Hollywood, Cal.
Richard J. Neutra, Architect; P. Pfisterer, Collaborator

AIRPLANES, AIRPORTS MAKE THE GREAT AIR AGE 78
By the Editors of Aero Digest

ARCHITECTURE FOR A HIGHWAY PROJECT 84
Proposed John C. Lodge Expressway and Civic Center for Detroit. Giffels and Vallet, Inc., L. Rossetti, Associated Engineers and Architects

BUILDING TYPES STUDY No. 96 . . . THE POSTWAR HOUSE 89
By Walter F. Bogner

Part I: The Direction of Progress for Postwar House Building 89

Part II: The Direction for Progress in the House Building Techniques 96

Part III: The Direction in Progress for Design 101

TIME-SAVER STANDARDS . . . Miscellaneous Closets 103

THE RECORD REPORTS . . . News from the Field 7

POST V-E DAY CONSTRUCTION FORECAST 17

FOR BETTER BUILDING 20
News of Materials, equipment and methods

REQUIRED READING 106

INDEX TO ADVERTISEMENTS 158

INDEX TO VOLUME 96 OF ARCHITECTURAL RECORD 160

H. JUDD PAYNE, Vice-President in charge of Magazine Division

Copyright 1944 with all rights reserved F. W. DODGE CORPORATION

EDITOR-IN-CHIEF, Kenneth Kingsley Stowell, A.I.A.; Managing Editor, Emerson Goble; Associate Editor, Douglas Haskell; Associate in South America, Edmund J. Whiting, A.I.A.; Assistant Editor, Jeffrey H. Livingstone; Desk Editor, Florence A. van Wyck; Art Director, W. K. Allen. CONSULTANTS: Industry Relations Consultant: Thomas S. Holden. Statistical Consultant: Clyde Shuter Building Economics Consultant: Norbert Brown. Field Research Consultant: Clifford Dunnells, Jr.

Architectural Record (combined with American Architect and Architecture) is published monthly by F. W. Dodge Corporation, 34 Crystal St., East Stroudsburg, Pa., with Editorial and Executive Offices at 119 West 40th Street, New York, N. Y. Thomas S. Holden, Pres.; Howard J. Barringer, Vice-Pres. and Treas.; Irving W. Hadsell, Vice-Pres.; Chauncey L. Williams, Vice-Pres.; Sanford D. Stockton, Jr., Secy.; Walter F. De Saix, Asst. Treas.; Edwin H. Freed, Asst. Treas. Member Audit Bureau of Circulation and Associated Business Papers, Inc. Architectural Record is indexed in Reader's Guide, Art Index and Industrial Arts Index. Subscription rates: United States and Possessions, Canada, Cuba, Mexico, Central and South America, $3 the year, $5 for two years, $6 for three years; elsewhere, $5 the year; single copy, $1. Every effort will be made to return material submitted for possible publication (if accompanied by stamped, addressed envelope); but the editors and the corporation will not be responsible for loss or damage. Other Dodge Services: Real Estate Record & Builders' Guide, Sweet's Catalog Files, Home Owners' Catalogs, Dodge Reports & Dodge Statistical Research Service.

Architects Polled on Flush Valves for Airports, Railway and Bus Depots

Below are shown the results of answers to a ballot asking this question:

> "Which types of Flush Valve combinations do you believe offer the most advantages for use in postwar airports and railway and bus depots?"

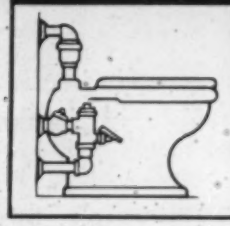
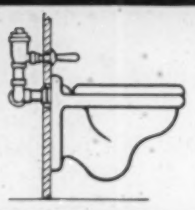
The voting was done by architects who have handled a large volume of work in the types of buildings indicated.

Flush Valve Application Data

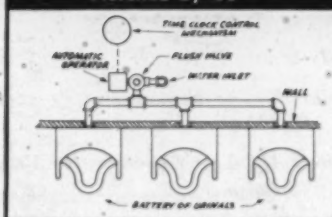
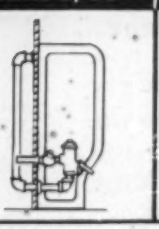
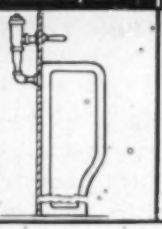
AIRPORTS, RAILWAY & BUS DEPOTS

Compiled by the manufacturers of Watrous Flush Valves

Flush Valve Combinations for Closet Bowls

1st choice FOOT-OPERATED Preferred by 55%	2nd choice CONCEALED Preferred by 30%	3rd choice SEAT ACTION Preferred by 10%	4th choice LOW TOP SPUD Preferred by 5%
			

Flush Valve Combinations for Urinals

1st choice AUTOMATIC OPERATION Preferred by 41%	2nd choice FOOT OPERATED Preferred by 33%	3rd choice CONCEALED Preferred by 21%	4th choice EXPOSED Preferred by 5%
			

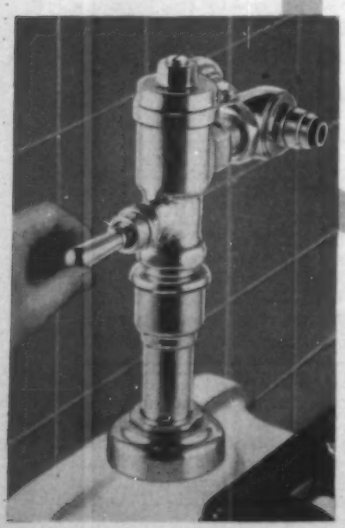
The sound design and careful workmanship built into Watrous Flush Valves make their selection a source of constant satisfaction over the years to everyone concerned.

Catalog No. 448-A includes complete information on Watrous Flush Valves. Write for your copy. Or see Sweet's Catalog File.

"Regular" or "Silent-Action" . . . WHICH?

{ 66.7% voted for "regular" flush valves
{ 33.3% voted for "silent-action" flush valves

THE IMPERIAL BRASS MFG. CO., 1240 W. Harrison St., Chicago 7, Ill.



Watrous Flush Valves

THE RECORD REPORTS

Government Surpluses and Where to Find Them • Builders' Supplies • Effects of Foreign Needs • Public Construction Projects • NHA's Housing Cost Survey Report

YEARS after the war has ended, the inside pages of the newspapers from time to time may carry short paragraphs of "filler" announcing that the government has sold the last iron bathtub or the last doorknob inherited from the Armed Services. Slightly larger stories, under fully visible headlines, may state that half or three-quarters of the whole stockpile has been sold. All that may happen. Meanwhile, the government officials who are supposed in one way or another to get rid of the surpluses are holding conferences and writing reports on how to reach their customers, and the customers are asking their congressmen, their trade associations, and those friends who occasionally visit Washington, where to find surpluses.

Surplus Stores

Just now the problem is mostly academic since there are no surpluses to speak of. While the Army and Navy are agitating to keep their present share or to get larger shares of current production, they are not in a mood for deciding that present stocks should be gotten rid of. Compared with what is to come, present stores are meager indeed.

Both the Armed Services and the civilian agencies of government put far less time into selling than into inventing and revising forms, into arguing over how to catalog, and into devising bits of ritual whose performance may be accepted as giving veterans, farmers and others the special privileges ordered by Congress. Whether the methods of selling the few odds and ends now on hand will still be used when the government has great masses of material to sell is less than certain. Government men think that the basic framework will survive countless changes of detail.

Supervising Agencies

Basically the Reconstruction Finance Corporation is charged with selling producers, and the Procurement Division of the Treasury with selling consumer goods. After each was assigned its realm, the agencies had to go through thousands and thousands of items, deciding which classifications they fell under and who was to handle them. Real and improved property, of course, went to RFC. Such materials as lumber, metal beams, etc., also came into its domain. Building components, particularly fixtures, also are sold by the Treasury. The RFC handles heavy, and the Treasury light, tools. All in all, the classifications are not easily summarized; fortunately there is an enumeration in a "Buyers Guide for Surplus Property," which may be had from the Senate Committee to Study Problems of American Small Business.

Just now the agencies are trying to work out methods for keeping inventories. Contractors no doubt would like to be able to ask, say, for so many carloads of brick, and to be refused with the promptness with which they are told at the cigarette store that there are no Luckies or Camels. Among the few things that the government men are sure of is that it will be much more complicated.

Regional Operations

Most items, particularly those sold by the Treasury, are handled at regional offices so that the contractor gains nothing by visiting Washington. In New York the office at 50 Church Street covers New York State, New Jersey and Pennsylvania; a Boston office presides over New England.

The district offices are continually making up mailing lists; government officials think that builders and others would do best by submitting their names. Merely to ask for sales announcements of "things that you use in building" probably will be insufficient since the offices do not always know what those things are. The Treasury itself would like to be able to keep the district offices in touch with each other so that demand originating, for instance, in Chicago, might be supplied if necessary from more adequate stocks in San Francisco. On some standard items it may be successful.

Role of RFC

The RFC, too, is feeding out its goods through regional offices: the New York address, covering New York State and New Jersey, is at the Federal Reserve Bank Building, 33 Liberty Street. Standard products such as steel

(Continued on page 10)

"Now see here, I was analyzed for this house—you should have thought of changing my ways before it was built!"

—Drawn for the RECORD by Alan Dunn

WELDWOOD ADDS

Comfort, Utility and Charm

TO THE HOMES YOU DESIGN

Peace will bring a new and better American Home . . . and your clients know it.

Sustained educational advertising has emphasized the progress in design and construction . . . the vast improvements in materials.

In their post-war homes your clients want post-war design . . . the improved methods and materials available to them.

They're not expecting mechanical marvels, but indications are that they will demand increased comfort and convenience . . . more "livability".

More and more, Weldwood is helping architects achieve the results their clients demand.

And modern architects take advantage of the structural and decorative superiority of Weldwood whenever possible.

They know that Weldwood brings to a modest home the durability and beauty formerly enjoyed only in a mansion.

They know, too, that their clients will appreciate the increased purchasing investment value that Weldwood gives a building dollar.

They know that a Weldwood home is delightfully livable . . . that comfort and convenience are "built in" features. That the durable beauty of Weldwood-paneled walls appeals to everyone.

You'll find that clients appreciate . . . and will buy . . . the comfort, utility and charm that you can design into their homes with Weldwood.

HERE'S *WHY* YOUR CUSTOMERS WILL WANT WELDWOOD:

STRUCTURAL ADVANTAGES

Dri-wall construction cuts building time as much as six weeks . . . eliminates dangers of warping, swelling and cracking in sash and woodwork due to the tons of water in plaster walls. All standard grades of Douglas Fir plywood are made in Weldwood's giant West Coast plants.

DECORATIVE FEATURES

Weldwood . . . in genuine mahogany, walnut, oak, knotty pine, figured gum, birch and Weldtex (striated Weldwood) . . . achieves the warmth and beauty of wood-paneled rooms at unbelievably low cost. Modern streamlined production has made this possible.

Inexpensive Weldwood Utility Panels, with satin-smooth hardwood faces, provide ideal wall surfaces for paper or paint . . . never show checking or grain-raise.

ECONOMY

Final results balanced against investment show Weldwood Plywood construction to give far more value per dollar than old-fashioned materials.

Because Weldwood can be installed rapidly . . . inside and out . . . building time is cut down, with resultant savings in labor cost.

DURABILITY

Weldwood Plywood Panels are crack-proof and are guaranteed for the life of the building. Weldwood walls are permanent walls, requiring no upkeep.

Weldwood

Plastics and Wood Welded for Good

Waterproof Weldwood, so marked, is bonded with phenol formaldehyde synthetic resin. Other types of water-resistant Weldwood are manufactured with extended urea resins and other approved bonding agents.

THE MENGEL FLUSH DOOR

Strength and Beauty . . . to match your Weldwood walls.

WELDWOOD Plywood

Weldwood Plywood and Plywood Products are manufactured and marketed by

UNITED STATES PLYWOOD CORPORATION *New York, N. Y.* — **THE MENGEL COMPANY** *Incorporated, Louisville, Ky.*

Distributing units in Boston, Brooklyn, Chicago, Cincinnati, Cleveland, Detroit, High Point, Los Angeles, Newark, New York, Oakland, Philadelphia, Rochester, San Francisco, Seattle. Also U.S.-Mengel Plywoods, Inc. distributing units at Atlanta, Jacksonville, Louisville, New Orleans. Send inquiries to nearest point.

★ BETTER WIRING FOR BETTER LIVING ★

Anyhow, Christmas comes but once a year!

SPEAKING of embarrassing moments—Bill Bjones' greeting to his Yuletide guests is awkward, to say the least.

It isn't at all funny to Mary either—while little Oswald is having a very merry Christmas, as you can see. And "Barkus" isn't helping the cause at all.

But this is likely to happen in any home that is *inadequately wired*—that does not have at least one duplex convenience outlet *for every 12 feet of unbroken wall space.*

Long loose wires and temporary connections are more than a *source of embarrassment* to home owners, too.

They endanger the safety of the family and the home, as well. They cut down the efficiency of lighting and electrical appliances. And they waste electricity.

• • •

To help you make certain that the wiring in the homes you design or build after the war is brought up to 194X standards, the Westinghouse Better Homes Department offers you *free technical advice* on this important subject.

Refer your problems relating to home wiring, selection and installation of electrical equipment, location of convenience and lighting outlets and lighting controls, modern circuit protection, etc., to our housing specialists. You will receive *authoritative information*, promptly.

If you haven't already sent for your *free copy* of the new book, "Electrical Living in 194X" . . . which illustrates the proper wiring of every room in the modern home and the correct location of convenience outlets, switches, etc. . . . we suggest you do so *now!*

Write: Better Homes Department (AR-124) Westinghouse Electric & Manufacturing Company, Pittsburgh, 30, Pennsylvania.

Westinghouse

Plants in 25 Cities ***Offices Everywhere***

TUNE IN John Charles Thomas, Sunday 2:30, EWT, NBC . . . Ted Malone, Monday, Wednesday, Friday 10:15 pm, EWT, Blue Network

 (Continued from page 7)

are easiest to catalog and to keep track of; if buyers are willing to pay the freight they will be able to get shipment from any district at all. For the time being, RFC is withholding its slender stocks because only dealers willing to pay about 30c per $1.00 of market price are bidding. The Agency intends to release its steel when removal of WPB restrictions on its use broadens the market. It hopes for best sales during the gap between V-E Day, when simultaneously war contracts are cancelled and civilian production is allowed, and the day some months later when mills advertise that they can fill ordinary construction orders. RFC officials say that they get scraps of lumber sometimes, but that amounts are too small to mention. They have no reason for thinking that they will get much more until the war is over.

Occasionally the Army and Navy have odds and ends which are sold directly by them. These are usually left-overs when some war contract is cancelled. Officers in Washington say that it is usually futile to go after them; they are snapped up on the spot.

Builders' Supplies

Immediately, WPB men judge that builders working under NHA programs are getting most materials from their regular suppliers at least as easily as people in other industries. Calls for help both to WPB and NHA, if anything, have been fewer—possibly because there is so much less building and because contractors who have stayed in business have shorter routes than those leading through the government agencies.

Supply after V-E Day remains obscure. WPB has agreed in principle (and has set up a complicated bureau to vouchsafe its agreement), that restrictions on building materials and components be removed before L-41 goes. But just as the contractors insist on this course to insure that when they start building they won't be caught shorthanded, so the component makers are urging that L-41 go first lest they be caught long. In principle the contractors have been victorious; the component makers will be turning out goods for inventory—whether their own, that of the distributors, or that of long-headed and well-financed contractors.

Effects of Foreign Needs

One difficult assignment which the government must meet will be to divide materials between the domestic and foreign markets. UNRRA, for example, wants a large amount of lumber, as well as other materials, immediately after V-E Day. With so much of substitutes around, the lumber men are fearful that shipments to Europe mean losing the domestic market permanently to gain a foreign one for a fraction of a year. Like considerations are being weighed in other materials industries.

It took a long time for WPB to decide to release components before construction, and it is taking a long time, now that the decision has been made, actually to do it. Over and above generalities about red tape and the exhaustiveness with which each proposal to ease up on something is reviewed, there are two reasons for this:

Problems of New Director

First, personal matters beyond his control prevented Arthur J. McComb, the director of WPB's new Construction Division, from giving full time to his job. Through his first month in office he was able to deal only with his immediate superiors, A. J. Krug and Hiland G. Batcheller. He made, but reluctantly had to break, an appointment with the lobbyists for the building trades. Thereafter they described him for the record as a "capable executive" which is the standard phrase for officials one must work with but whom one doesn't know. Newspaper men who wanted to see the "construction czar" inferred that he was publicity-shy. Mr. McComb is deeply apologetic that he has put off so many who are eager to meet him, and promises to keep his door open as soon as he can. Meanwhile the WPB order creating his office and broadly blocking-out its functions has been filled in in full detail and a staff has been organized.

Second, the Army is far less receptive to reconversion than it was a few months ago when it hoped for almost immediate victory. Once more, it resists the loosening of restrictions, and, even more, publicity which stirs agitation and hope.

Construction Bureau's Task

The stated objective of the Bureau is to administer construction "for war and essential civilian needs" and to keep different kinds of construction from interfering with each other. This entails such jobs of the former Facilities Bureau as deciding preferences among competing jobs but also pushing the output of materials and components. Among other things, the Bureau is asked to recommend modifications of restrictions on utility equipment, presumably to provide for sewage, lighting, gas connections in new neighborhoods when new housing is built.

Within the Bureau is a Construction Requirements Committee which adds up the materials required by the industry, then asks for them through the top WPB Requirements Committee charged generally with such allocation. The Construction Committee includes representatives of the Army, Navy, NHA, Petroleum Administrator, Smaller War Plants Corporation and others.

A program section tries to forecast construction volume and materials supplies, while keeping abreast with immediate supplies and demands. After the war this section may be brought into the construction division of the Department of Commerce. The project review section carries on work of the Facilities Bureau, approving or denying particular applications. Jobs under $100,000 may be acted on directly; larger ones must go through more red tape, notably review by the Construction Requirements Committee. Plumbing and heating, building materials and construction machinery divisions have all been brought into the bureau.

Trade Group Activities

The group of trade associations, led by the Chamber of Commerce, which tried for the past year to secure a Construction Bureau, wanted simultaneously to get formal recognition as the Bureau's advisory committee. When the Department of Justice objected, the old Facilities Bureau tried for a while to fit different segments of the industry into a picture which both Justice and the trade groups considered representative. Since nobody proved ingenious enough to do that, the trade associations anticipate that their informal meetings with the Bureau, sanctioned, as the associations like to point out, by the Constitutional right of petition, will go on. Meetings with the Facilities Bureau became almost systematic and routine; they differed from formal ones in that dates were not set by the Industry Advisory Division and that WPB did not issue summaries to the trade and the trade press. Now that they have a bureau, the associations are more or less marking time while awaiting a new issue, helping to get a bigger construction unit started in Commerce, bickering with Blandford about whether materials should be allocated to public housing, and the like.

(Continued on page 12)

IS THIS REALLY THE AGE OF PLASTICS?

Will your postwar home be made of plastics? What about your new car—your vacuum cleaner—your combs, brushes and clothing accessories? Are all these products entering the "Age of Plastics"?

Some people think so. The prospects for plastics are so great—so intriguing are these materials to industrial designers—that it is quite understandable to write and speak of the plastic age.

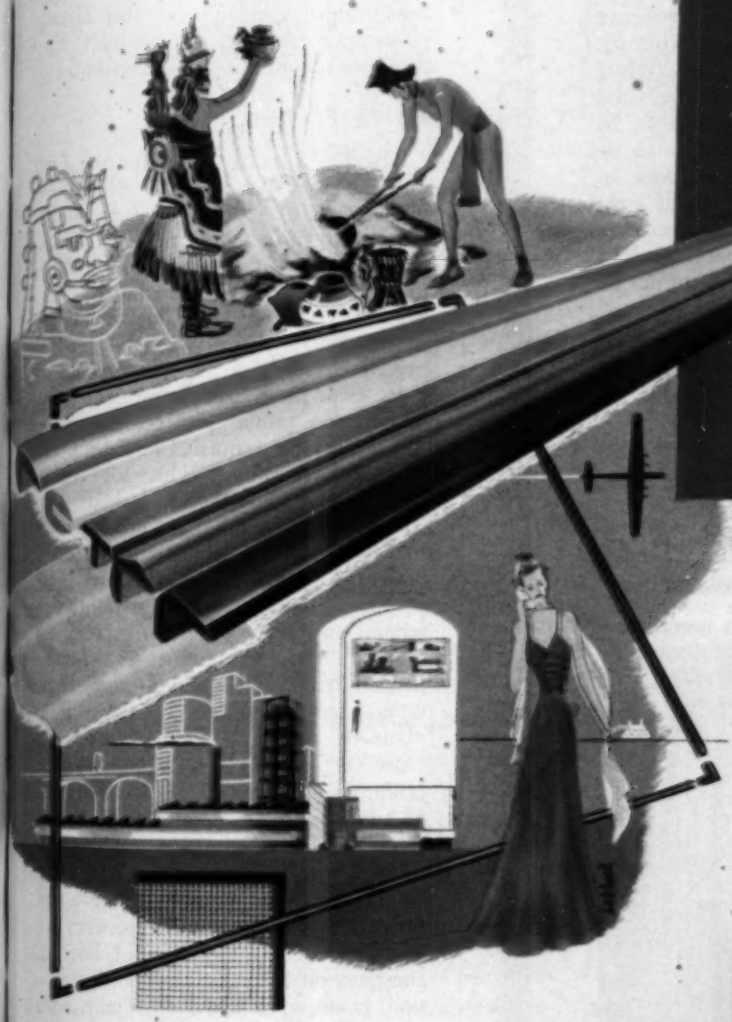
Yet only today, with the war entering its final phase, is it possible to evaluate the place of plastics in the postwar world. That place, without question, will be big. But plastics, of course, will not revolutionize our lives. Like other materials they will be used wherever their distinctive properties serve best.

Let's look at the home of tomorrow. On your windows—rustproof insect screening made of Saran, a Dow Plastic. Look again and you'll discover this same material woven into beautiful, stainless, dirt-proof fabrics for draperies and long wearing upholstery.

In the kitchen, your new refrigerator reveals its store of food through Styron inner and outer walls. This material combines brilliant transparency with high insulating qualities. On the walls of every room are lustrous electric fixtures. These, too, are Styron. Even Mother's combs, brushes and costume jewelry owe new beauty and longer life to this widely used plastic.

Out in the garage, the family car presents tasteful plastic trim with new-found functional value. Ethocel, another Dow war-tested material, is the answer. It even makes the steering wheel stronger, more attractive and warm to the touch.

All this is but a momentary glimpse of the plastic picture. We know you'll find plastics in many places—and soon. But remember—they will serve you best when rightly used.



Dow Plastics include
Styron, Saran, Saran Film, Ethocel and Ethocel Sheeting

THE DOW CHEMICAL COMPANY, MIDLAND, MICHIGAN

New York • Boston • Philadelphia • Washington • Cleveland • Detroit • Chicago • St. Louis
Houston • San Francisco • Los Angeles • Seattle

DOW

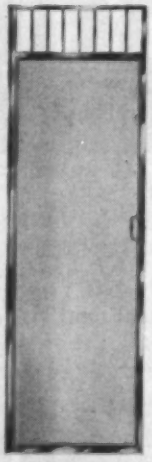
CHEMICALS PLASTICS MAGNESIUM

INDISPENSABLE TO INDUSTRY AND VICTORY

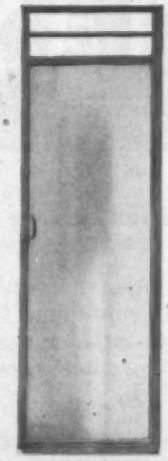
FIAT GLASS SHOWER DOORS

For shower cabinets and built-up showers
Standard size for opening 24" x 72"

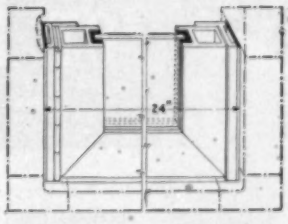
A better shower door at moderate cost has been achieved by Fiat through standardization on one size and volume production methods in manufacturing. A high quality of materials and construction is embodied in the Zephyr aluminum framed glass shower door and the Senior brass framed door. These products are of new importance to the plumbing jobber and master plumber because of the anticipated increased use of glass shower doors in postwar building. Practical features in design and construction developed through twenty-five years experience in building shower equipment are incorporated in these Fiat shower doors to make a high grade product of unusual values.



SENIOR DOOR
Chromium plated brass



ZEPHYR DOOR
Aluminum



CONSTRUCTION DETAILS

SENIOR DOOR INSTALLED

The water deflector with gutter prevents water dripping on the floor when door is opened.

FIAT METAL MANUFACTURING COMPANY

1205 Roscoe St., Chicago 13, Illinois

21-45 Borden Ave., Long Island City 1, N. Y. • 32 S. San Gabriel Blvd., Pasadena 8, Calif.

(Continued from page 10)

NHA Survey

In early November the NHA distributed a long questionnaire to local housing authorities including application blanks for postwar financial help. Questions included census blanks of present housing supply and its condition, descriptions and estimated costs of proposed projects, etc. In many cities newspapers carried stories that NHA, quite gratuitously, was opening a drive for public building. As a matter of fact, the Budget Bureau of the government had been assigned the job of estimating all postwar public projects and had farmed out the housing figures to NHA.

Similarly the Federal Works Administration had been asked, both by the Budget Bureau and the House postwar committee, to assemble figures on non-housing construction.

Public Projects

The FWA figures that for the first postwar year at least $6 billion in public projects should be ready in the event of a construction industry slump. Since much skilled labor will still be in the Armed Services during the earlier part of that year, it does not favor pushing the projects too hard lest private construction be starved out.

Its estimate is that at present fully blueprinted public projects come nowhere near the requisite amount. Over and above public works, for which appropriations will be asked this spring, the federal shelf totals only half a billion, but this total could be blown to three or four times its present size. Highways financed jointly by federal and state governments total $1 billion. Of the remaining $3.5 billion needed from states and local governments, only $1 billion has been fully planned, according to FWA figures. However, the $3.7 billions are in a preliminary stage of preparation and $6.2 billion in the dream stage. Under recent legislation FWA will help finance the designing of the projects.

The kinds of projects under way suggest that the local governments are counting on a resumption of housing construction. Sewer, water and sanitation facilities, schools, etc., take high place. Since deferred maintenance is excluded, much of this presumably entails opening new neighborhoods.

Postwar TVA's

The most important development in public construction is the recent agreement between the Bureau of Reclama-

(Continued on page 14)

BRIXMENT *Assures More Economical Brickwork*

● Aside from the cost of the brick itself, the most expensive item in masonry construction is the bricklayer's time.

Therefore the most economical mortar you can buy is the one that enables the bricklayer to lay the most brick per day. You cannot afford to give your bricklayer any mortar which causes unnecessary work, such as constant retempering, stooping to the board to replace mortar that failed to stick when he threw up the head-joint, etc. . . . To secure economical brickwork, the mortar must have excellent workability.

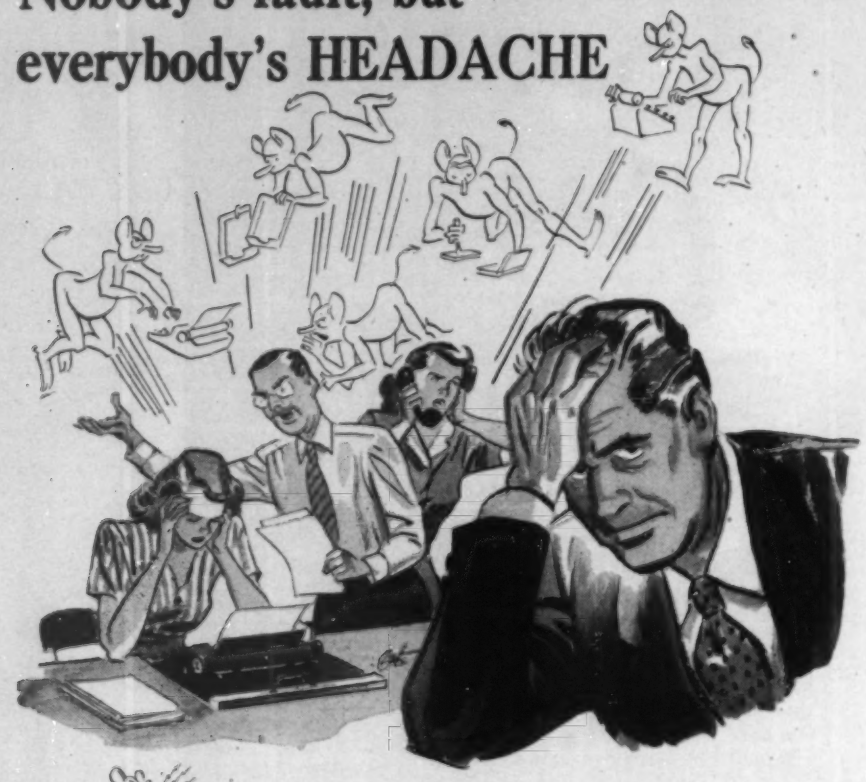
The plasticity of Brixment mortar is *ideal*. It approaches that of straight lime putty. It enables the bricklayer to do faster, neater brickwork, with the brick well bedded and the joints well filled.

This is the principal reason why Brixment reduces the cost of brickwork. In addition, less labor and supervision are required in mixing. No soaking or slaking. No mortar wasted. And it makes a neater job that costs less to clean down.

Mix a batch of 1-3 Brixment mortar (above) and a batch of 50-50 cement-lime mortar made with the same proportion of sand (below). Get any competent bricklayer to test them on the board—to spread them on the wall—to lay up a few brick with each of the two mortars. Then ask him which has the best workability!

LOUISVILLE CEMENT COMPANY, Incorporated
General Offices: Louisville 2, Kentucky
Cement Manufacturers Since 1830

Nobody's fault, but everybody's HEADACHE



It's economical to get rid of noise demons with a ceiling of Armstrong's Cushiontone

BUSY OFFICES breed noise demons. They come from clattering machines, shrill bells, loud voices. They jangle nerves, cause errors, cut down efficiency. In planning new offices, or remodeling old ones, you can give your clients freedom from noise demons simply by specifying the installation of an economical ceiling of Armstrong's Cushiontone.

Cushiontone absorbs up to 75% of all noise striking its surface, thanks to 484 deep holes in each 12" square of this fibrous material. This high efficiency is permanent, too—not even repainting can affect it. Armstrong's Cushiontone is quickly installed, easily maintained. In addition, a ceiling of Cushiontone is decorative and is an excellent reflector of light.

See Sweet's and write for your free copy of new fact booklet to Armstrong Cork Company, 2412 Stevens Street, Lancaster, Pennsylvania.

THE RECORD REPORTS

(Continued from page 12)

tion, which develops irrigation and flood control, and the Army Engineers, charged with keeping the rivers navigable, on a series of postwar TVA's. The President, who briefly mentioned the projects during his campaign, is expected to elaborate them in his message to the new Congress. The projects are expected to bring several hundred thousand small farms to land that is now desert. Additional to the major construction, they will involve a considerable amount of new housing, perhaps under public auspices.

Housing Cost Study

NHA has finally published its studies of housing needs and housing costs after the war. The cost study, as expected, emphasizes the expense entailed in present methods of distributing materials through dealers, suggesting that much could be saved through greater standardization that would encourage straight line production and the placing of orders directly on the mill. The study of requirements stresses especially the low-price-low-rent market which, according to NHA, has scarcely been touched to date.

The NHA study repeats an idea that many contractors have considered over and over again but never developed: making contracts, for some stipulated sum, to take care of the maintenance of large numbers of single-family houses.

The future of Senator Taft's subcommittee on housing will be decided soon after the new Congress meets. If Senator George's postwar committee, of which it is a part, continues, the subcommittee will carry forward its own work. Otherwise Taft will try to organize a committee to deal directly with housing.

◆ ◆ ◆

WPB NOTES

Construction Limitations

Modifications in the Construction Limitations applicable to certain authorized building projects, which reflect recent changes in WPB orders governing materials used in construction, have been made in Schedule A to Controlled Materials Plan Regulation No. 6.

The revised restrictions are applicable to all construction authorized on Form GA-1456 whenever issued. A builder who has received such an authorization may follow either the new or the old restrictions. The changes also apply to certain utility construction controlled by WPB Order

(Continued on page 108)

Did You Know That—

35%

of Today's Home Owners Intend to Buy An

Electric WATER HEATER?

YES, an extensive survey made this year for The National Electrical Manufacturers Association shows that:

33.4% of today's home owners —and

44.9% of all families interviewed (tenants and home-owners combined) intend to buy an electric water heater after the war.

Why this great swing? Because *electric* water heaters are:

SAFE—Flameless, fumeless
CLEAN—Smokeless, sootless
EASILY INSTALLED—Require no flues or vents, no lengthy hot water pipes—and as
TROUBLE FREE as electric lights.

Give home builders and buyers what they want. Include electric water heaters in every home you build.

ELECTRIC WATER HEATER SECTION
NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION

CLARK • ELECTROMASTER • FRIGIDAIRE • GENERAL ELECTRIC • HOTPOINT • HOTSTREAM • KELVINATOR • MONARCH • NORGE • PEMCO • REX • RHEEM • SELECTRIC • THERMOGRAY • THERMO-WATT • UNIVERSAL • WESTINGHOUSE

A House Wired For An ELECTRIC RANGE Is Already wired for an Electric WATER HEATER!

POST V-E DAY CONSTRUCTION

CONSTRUCTION activity in the United States during the first 12 months after an allied victory in Europe, or after that day when most war controls on materials and manpower are relaxed, whichever is earlier, is likely to approximate the volume of the year 1938, according to estimates made by F. W. Dodge Corporation.

The 1938 contract volume for the 37 estates east of the Rocky Mountains, Dodge reports, was $3,197,000,000, as compared with an indicated final contract total for the current year 1944 of approximately $2 billion.

"The extent of construction industry revival that will take place in the calendar year 1945 hinges directly upon the victory time-table," Thomas S. Holden, president of the Dodge corporation, states. "Victory in Europe before mid-January, 1945 would likely result in a year's contract volume 50 to 60 per cent greater than that of the calendar year 1944; victory in March, 1945 would probably result in a 20 to 25 per cent increase in the next calendar year over the current one; victory on June 1, 1945, or thereafter, would probably mean a 1945 construction program about equal to that of this year.

"While potential demand is large, and while the industry itself (outside of some manufacturing lines) has no reconversion problem, the real question is as to the speed with which certain temporary bottlenecks can be overcome or with which full peacetime demand can be effective." The principal bottlenecks are government controls, material supply problems, price problems and manpower problems, Mr. Holden pointed out.

The most comprehensive direct evidence of postwar construction demand, Mr. Holden said, consists in the 55,140 listed projects reported by the field staff of the Dodge corporation. The estimated total cost of these projects is $11 billion. Of these projects 20,798, amounting to $5.1 billion, have been reported in the design stage.

"Designed projects, in estimated dollar value, amount to 60 per cent more than the total dollar volume of contracts awarded in 1938," Mr. Holden continued. "It is to be noted, however, that these reported postwar projects include a preponderance of public construction. The high total value of public postwar projects reflects the numerous pressures put upon public officials to prepare ambitious postwar plans, and the fact that large numbers of local public projects were planned in anticipation of federal subsidies, not at all likely to be forthcoming in 1945."

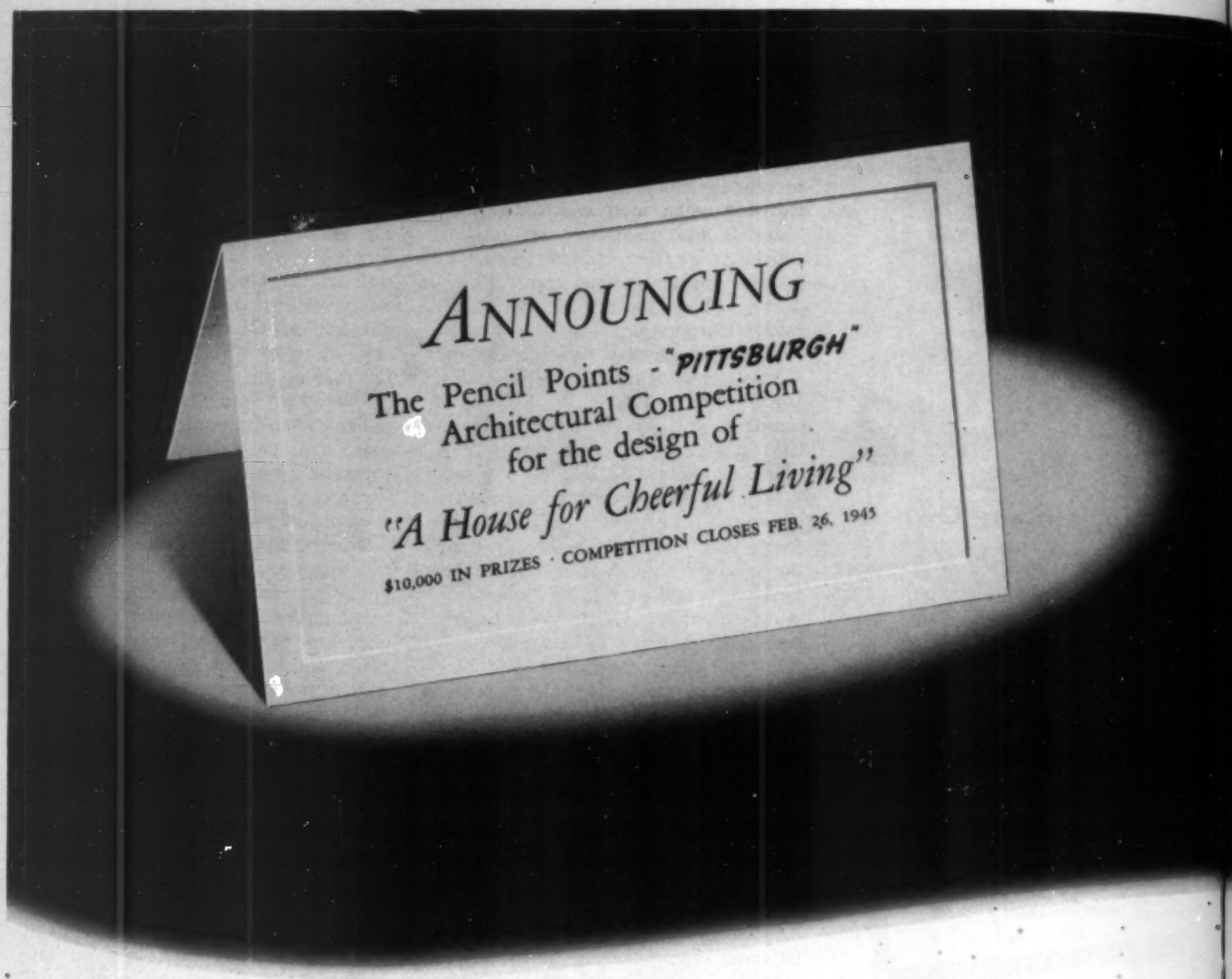
Mr. Holden remarks that relaxation of construction limitation orders has already begun, but draws attention to the fact that it will be several months after X Day when controls are more widely relaxed before adequate supplies of certain important construction materials and equipment will be available. "Various surveys," he says, have indicated that three to six months will be required, after green lights have been given, to produce supplies adequate in quantity and variety of such fabricated items as metal windows, plumbing fixtures, heating equipment, and builders' hardware."

THE DODGE CONSTRUCTION OUTLOOK FOR FIRST 12 MONTHS AFTER X DAY*
VALUATION OF CONSTRUCTION CONTRACTS - 37 EASTERN STATES
(Millions of Dollars)

PROJECT CLASSIFICATION	ANNUAL AVERAGES		ESTIMATES		
	REVIVAL 1920 – 1929	DEPRESSION 1930 – 1939	A CALENDAR YEAR 1944	B FIRST 12 MONTHS AFTER X DAY	% CHANGE B vs A
COMMERCIAL BUILDINGS	736	247	75	150	↑ 100
MANUFACTURING BUILDINGS	400	158	455	300	– 34
EDUCATIONAL AND SCIENCE BUILDINGS	346	196	77	135	↑ 75
HOSPITAL AND INSTITUTIONAL BUILDINGS	118	81	54	100	↑ 085
PUBLIC BUILDINGS	59	108	12	60	↑ 400
RELIGIOUS BUILDINGS	115	38	12	40	↑ 233
SOCIAL AND RECREATIONAL BUILDINGS	176	73	32	50	↑ 56
MISCELLANEOUS NON-RESIDENTIAL BUILDINGS	49	25	155	100	– 35
TOTAL NON-RESIDENTIAL	1995	926	873	935	↑ 7
APARTMENTS, HOTELS AND DORMITORIES	989	199	112	200	↑ 79
ONE AND TWO FAMILY HOUSES	998	516	195	850	↑ 336
OTHER SHELTER	—	4	40	25	– 38
TOTAL RESIDENTIAL	1987	719	347	1075	↑ 210
TOTAL BUILDING	3980	1645	1220	2010	↑ 65
TOTAL PUBLIC WORKS AND UTILITIES	970	950	800	1100	↑ 38
TOTAL CONSTRUCTION	4950	2595	2020	3110	↑ 54

Total residential building estimate for first 12 months after X Day contemplates 300,000 non-farm dwelling units in Continental United States, or approximately 210,000 in the 37 states covered by F. W. Dodge Corporation and within the reporting minimum valuations.

*Column B estimates will fit the calendar year 1945, if X Day comes before January 15, 1945.
Column B estimates reduced by 20 per cent, will fit the calendar year 1945 if X Day comes some time in March 1945.
Column B estimates marked down by a third will fit the calendar year 1945 if X Day comes after June 1, 1945.


ANNOUNCING
The Pencil Points - "PITTSBURGH"
Architectural Competition
for the design of
"A House for Cheerful Living"
$10,000 IN PRIZES · COMPETITION CLOSES FEB. 26, 1945

"PITTSBURGH" believes that the near future will see the resumption of an already well-established trend toward the use of more glass in American houses. This trend has manifested itself in larger window areas, in a more extensive use of mirrors and glass blocks, in wider application of structural, plate, tempered and other kinds of glass.

Since architects have been the leaders in applying both the principles of modern science and the products of modern technology in the design of ever-better residences, Pittsburgh Plate Glass Company and Pittsburgh Corning Corporation take pleasure in sponsoring this architectural competition, instituted to encourage possible further developments in the field of domestic architecture, and to extend the general understanding of the intelligent uses of glass and glass products.

The problem calls for designing a house for a family of four in a typical metropolitan suburban community, anywhere in the United States.

The competition is authorized by the Reinhold Publishing Corporation, publishers of Pencil Points. It will be conducted by Kenneth Reid, A.I.A., as Professional Adviser, and judged by seven architects of proven distinction.

It is open to all architects, architectural draftsmen and architectural students. Members of the American Institute of Architects, under a ruling by the Institute Committee on Competitions, are permitted to enter.

There are no entry blanks or entry fees involved. The winning designs will be widely publicized throughout the country . . . and any resulting inquiries about them will be referred to the authors of the respective designs.

We urge you to send the coupon today for a reprint of the Official Program and latest literature containing up-to-date information on glass and its use. This material will be of real assistance to contestants. The Official Program appears in the December issue of Pencil Points.

PPG

PITTSBURGH PLATE GLASS COMPANY

THE PRIZES

First Prize	$2,500
Second Prize	1,500
Third Prize	1,000
Fourth Prize	500
25 Mentions @ $100 each	2,500
8 Special Prizes @ $250 each*	2,000
Total	$10,000

**For details showing intelligent use of glass on the interior. The sponsor may, in addition, purchase any of the unpremiated designs for $100 each.*

THE JURY

Pietro Belluschi, A.I.A., Portland, Ore.
Ralph Flewelling, A.I.A., Los Angeles, Calif.
J. Byers Hays, A.I.A., Cleveland, Ohio
Robert M. Little, A.I.A., Miami, Fla.
Louis Skidmore, A.I.A., New York, N.Y.
Hugh A. Stubbins, Jr., Boston, Mass.
Philip Will, Jr., A.I.A., Chicago, Ill.

Some Pittsburgh Products you may wish to consider

Pittsburgh Polished Plate Glass (in all thicknesses and colors)
Carrara Structural Glass
Pittsburgh Mirrors
Figured Glass
PC Glass Blocks
Pennvernon Window Glass
Herculite Tempered Glass
Solex Heat-Absorbing Glass
Twindow—The Pittsburgh Multiple-Glazed Unit
Pittco Metal Mouldings

Mail the coupon for helpful information. A reprint of the Official Program will be mailed on request, together with a special assortment of literature describing the various glass products manufactured by the sponsors. This material will be of assistance to contestants.

PITTSBURGH CORNING CORPORATION

Pittsburgh Plate Glass Company
2396-4 Grant Building, Pittsburgh 19, Pa.

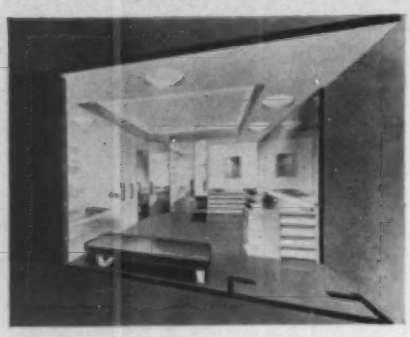
Please send me, without obligation, a reprint of the Official Program for the Pencil Points—"Pittsburgh" Architectural Competition, and latest literature on the use of glass.

Name.....

Address.....

City..... State.....

FOR BETTER BUILDING



Among the features of this postwar bathroom design is a built-in radio

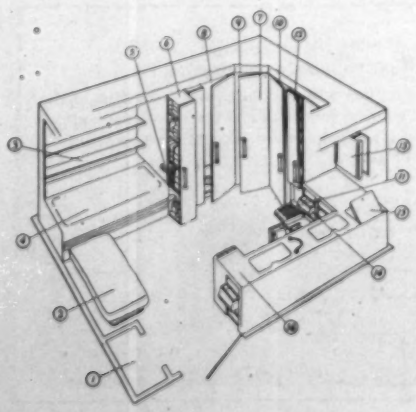
BATHROOM DE LUXE

Allegheny Ludlum Steel Corporation, Brackenridge, Pa., has released another in its series of "inspirational designs for postwar living," the first of which was the "maidless kitchen" introduced last summer (see ARCHITECTURAL RECORD, Aug. 1944, p. 44). The new design is a *lavatorium,* a super de luxe bathroom executed for the company by Egmont Arens, New York industrial designer.

As one of the chief aims of the design is to break up the pre-breakfast hour bathroom traffic bottleneck, twin wash basins, a separate toilet compartment and separate shower room are incorporated among the bathroom's 26 features. Also included are pedal control for water, stools that swing out from under basins, built-in ash trays and built-in radio, closed space between bowls for towels, toothbrushes, etc., and electric outlets between the wash basins.

Other features (see illustrations) are: (1) closet for storing hair dryer, vibrator, etc.; (2) sun lamp and couch with waterproof covering; (3) shelves over tub; (4) extra high tub for ease in bathing children and cleaning, with concave sides to prevent splashing; (5) thermostatic control for tub; (6) pull-out closets which may be reached from either side; (7) three-way mirrors; (8) separate tile or stainless shower room, convertible for steam bath, with shower spray from three sides, and thermostatic control; (9) separate toilet room; (10) drying closet with slide-out racks, heated and ventilated for quick drying; (11) built-in scale that folds into the wall; (12) pull-out stainless medicine chest, reached from either side, with safety compartment for poisons, etc.; (13) adjustable magnifying mirror with built-in lights; (14) drawers of "Pluramelt" — stainless steel inside, porcelain enamel outside; (15) clothes chute to basement; (16) stainless steel top for wash basin and cabinet area; (22) spray head for shampoo; (25) fluorescent no-shadow face illumination; (26) overhead lights at wash basins and tub.

Diagram of the bathroom's 26 features



THIN FLUORESCENTS

Development of a new line of very thin fluorescent lamps in lengths ranging from 3½ to 8 ft. and diameters of from ¾ to 1 in., has been announced almost simultaneously by two companies.

The first of these, *Slimline Mazda Fluorescent Lamps,* consists of four units, the longest measuring only 1 in. in diameter and nearly 8 ft. in length. Another 1-in.-in-diameter lamp is approximately 6 ft. long, and two ¾-in.-in-diameter sizes are approximately 3½ ft. and slightly more than 5 ft. in length respectively.

All four lamps will be of the instant starting type. Each will have a single pin base, will be of hot cathode design, and (to begin with) will be furnished in white color only. At their present stage of development the new lamps have an estimated life rating, at 200 milliamperes operation, equal to that of the 40-watt Mazda F lamp—from 2500 to 6000 hours, depending on frequency of "on" and "off" lighting in service.

Initial efficiency averages approximately 60 lumens per watt. Suitable for operation either singly or in multiple with ballast, or in series circuits with a high-voltage transformer. General Electric Co., Nela Park, Cleveland, Ohio.

To be manufactured as soon as war conditions permit, the second line of *slimline* lamps also offers four sizes: 42 in., 64 in., 72 in. and 96 in. overall lengths, taking into account the sockets and single pin bases at both ends. Diameter of the bulb ranges from ¾ in. in the case of the 42 and 64 in. lengths, to 1 in. for the 72 and 96 in. lengths. The 60 in. standard fluorescent lamp, the longest type heretofore made by this company, had a diameter of 2⅛ in.

The new lamps, all high efficiency hot cathode types, were developed primarily for showcases, wall cases and coves in stores, restaurants and other places where a long, slim light source is desired. They average approximately 60 lumens for each watt of electricity consumed, will start immediately at the flick of a switch. All four lengths are designed to burn at various levels of brightness, operating on either 100 or 200 milliamperes of current. They will be available only in the standard white color. Westinghouse Lamp Division, Bloomfield, N. J.

SYNTHETIC RESIN

Monsanto Chemical Company, St. Louis, Mo., has announced perfection of a new synthetic resin which, "when properly used in a low-pressure lamination process, will all but eliminate size as a restrictive factor in postwar plastics."

In effect, the company claims, this means that an entirely new field has been opened to the plastics fabricator, whose mass production output is now very largely limited to small items such as table radio cabinets, telephone cases, instrument housings, tablewear, compacts, and kindred small items.

To produce even these through existing compression or injection molding methods, company officials point out, fabricators must employ large and costly machines whose size and weight progress in geometric ratio to the size of the plastic object being manufactured. Molded items larger than 36 in. across, other than flat sheets or panels, are today virtually unknown.

In low-pressure lamination, heavy machines are not needed. Moreover, manufacture is simplified by the fact that existing three-dimensional items may be used as forms or molds, and thus duplicated in plastic.

To produce a plastic bathtub, for illustration, the postwar fabricator will first make a textile coat to fit either the outer or inner dimensions of the mold, which in this instance might be a conventional bathtub. The textile coat then is impregnated with the resin, slipped on or into the mold, and baked for about 10 minutes after the center of the laminate reaches the temperature of boiling water.

Prospective uses already listed include curved wall panels, trailer bodies, curved funiture, machine housings, vermin-proof chests and vaults, and full sized radio and television cabinets.

(Continued on page 22)

This modern building

has a KOPPERS roof

because of a record

made a generation ago

by Koppers roofing materials

If you measure time in terms of Koppers roots, "Tomorrow," was here yesterday. For the roofing materials that were tops in grandfather's day, are being specified by designers today and will be specified during the years to come.

More and more architects and designers are seeing the advantages of coal tar pitch in roofing and are specifying Koppers Old Style Pitch and Approved Tarred Felt for their present projects because they have given such remarkable service in the past. And they will continue to specify them because nothing better than coal tar built-up roofing has been developed during all the recent marvelous discoveries of science.—Koppers Co., Inc., Tar and Chemical Div., Pittsburgh 19, Pa.

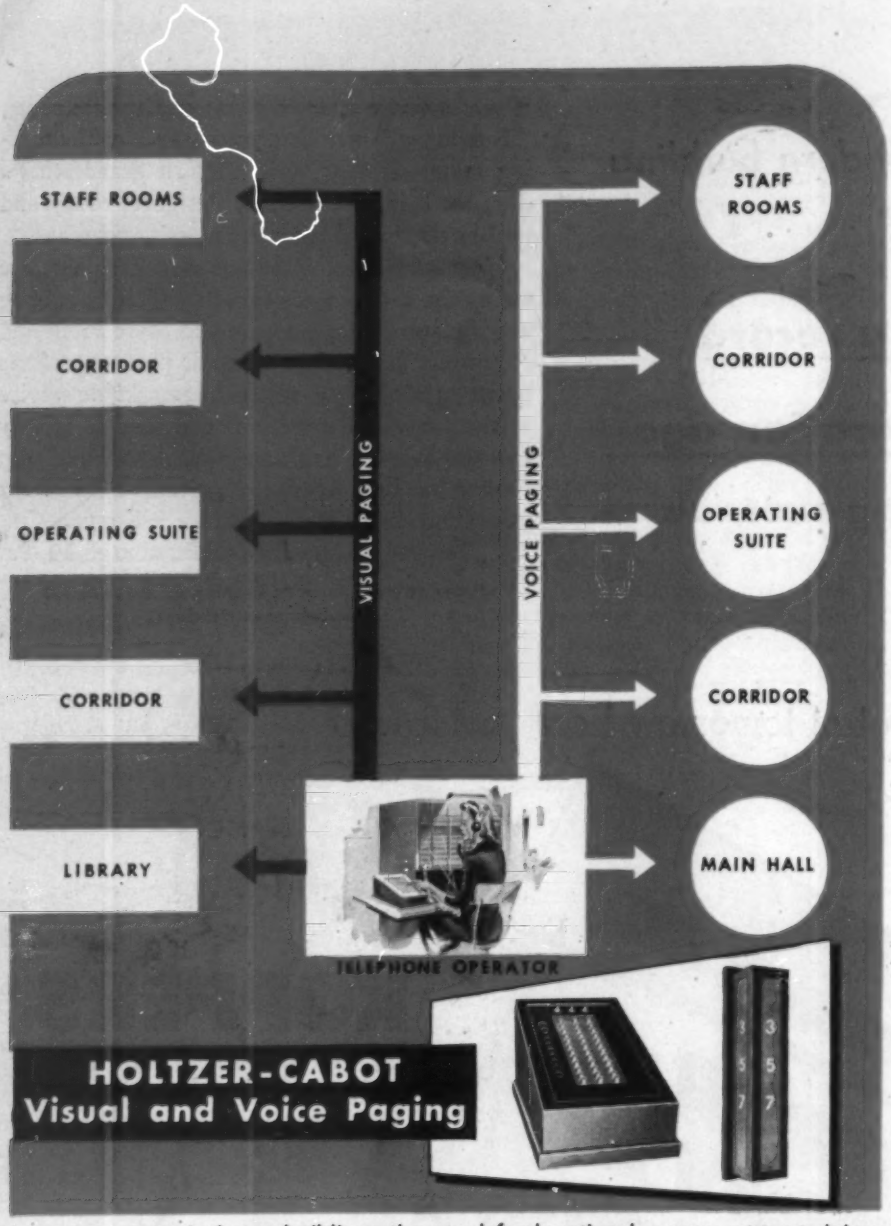
Refer to your Sweet's Catalog or write us for complete specifications.

Was the roof of tomorrow here yesterday?

KOPPERS

The Industry that serves all Industry

Hunter College, New York, Shreve, Lamb & Harmon, Architects



In large buildings the need for locating key men without delay presents a major problem. Holtzer-Cabot has two solutions for this problem: *visual paging* for general use, and *voice paging* for conditions where voice is not objectionable and the noise level is not excessive.

An outstanding feature in the Holtzer-Cabot Auto-Sequence *visual paging* system is the elimination of pauses between calls, no matter whether one or several code signals are transmitted at the same time. Three or six different calls may be flashed automatically in sequence depending on whether a three or six circuit control keyboard is used. After the person called has been located, the action in eliminating the call without disturbing the flashing sequence of other calls is automatic.

Holtzer-Cabot complete signaling equipment, such as Nurses' Call, Phonocall, Staff Registers, Return Call, Night Lights, etc. are available for new installations or additions to existing systems. Our engineers will gladly analyze your needs, make recommendations and supervise installations. Ask for their help.

Catalog on Holtzer-Cabot Signaling and Communications equipment will be sent on request.

HOLTZER-CABOT

Division of First Industrial Corporation

Pioneer Builders of Signal Systems Since 1875

400 STUART STREET, BOSTON 17, MASSACHUSETTS

Engineers Located in Principal Cities

See SWEET'S ARCHITECTURAL FILE

FOR BETTER BUILDING

(Continued from page 20)

CIRCUIT BREAKER

A new 100-ampere "De-ion" circuit breaker just announced is said to require less space and permit lighter structures for distribution panelboards, built-in applications and bus duct plug-ins.

All ratings are available in one compact breaker with uniform pole spacings and terminal arrangement, providing complete interchangeability between ratings. The new F Frame permits a 100-ampere, 600-volt a-c or 250-volt d-c breaker in the same space formerly required by the 50-ampere, 600-volt a-c- or 250-volt d-c rating.

Equipped with thermal and instantaneous magnetic trip elements, the "De-ion" fuseless circuit breaker permits maximum loading of circuits and fast resumption of interrupted service. Contact pressure increases with wear, thereby prolonging the life of contacts and breaker. Silver alloy contacts give increased contact life with lower wattage loss. The special alloys used also prevent "freezing." Both two and three-pole units are available. Westinghouse Electric and Mfg. Co., Pittsburgh, Pa.

INSULATED LEAD WIRE

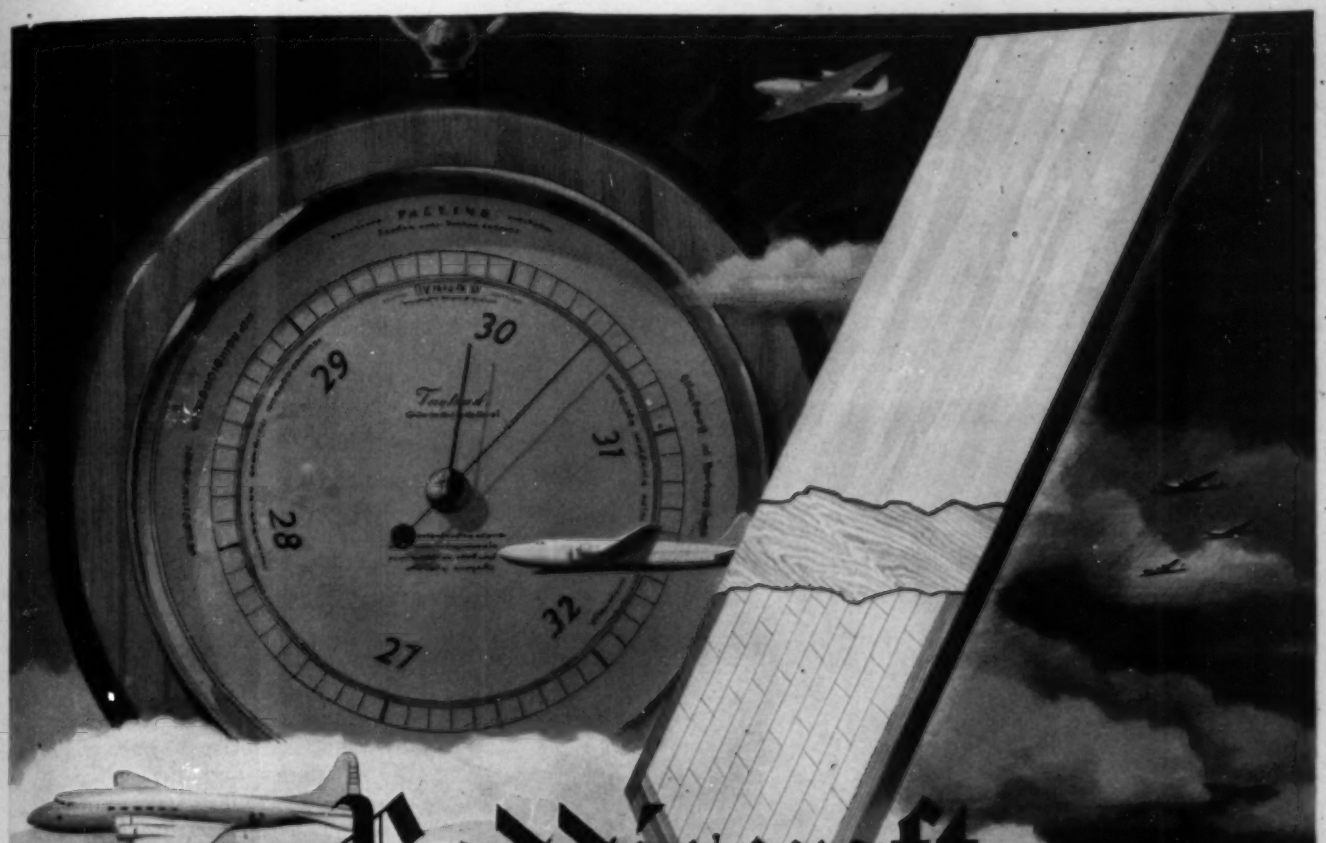
A new *Deltabeston Flamenol* thermoplastic insulated lead wire for use in all types of fluorescent lamp ballasts is approved by the Underwriters' Laboratories for use as lead wire in lighting fixtures wherever 600-volt service is required. It is approved for 176° F.

The insulation of the new wire is superaging and resistant to flame, oils, acids and alkalies. Available in solid and stranded conductors, sizes 16 and 18 AWG in brilliant colors, including black, white, red and green. Mechanically strong and flexible, it will not rupture when bent, is free stripping, easy to splice and terminate. General Electric Co., 1285 Boston Ave., Bridgeport 2, Conn.

SKETCHING BLOCK

A patented sketching block designed especially for draftsmen, engineers and surveyors, has a patented non-slip cover with four separate and distinct "wings," uniquely attached. These wings are imprinted with 1/10-in., ¼-in., and ½-in. scales, plus an isometric chart over a ⅛-in. scale. The block contains 75 sheets of fine tracing vellum 9 by 12 in. in size, and is so constructed that any one of the attached scales can be inserted directly beneath the tracing paper. The Craftint Mfg. Co., Cleveland, Ohio.

(Continued on page 24)



Roddiscraft

PROCESS OF STANDARD CONSTRUCTION FOR FLUSH VENEER DOORS IS SPECIFIED FOR ALL AIRCRAFT PLYWOOD

THE RODDISCRAFT process of flush veneer door construction, introduced by Roddis ten years ago, is now specified by army and navy aeronautical engineers for all aircraft plywood. Permanently waterproof, fungiproof, and inert to chemical activity, the Roddiscraft process, applied either to doors or aircraft plywood, insures durability — immunity to climate and weather.

Roddis' half-century of leadership in the manufacture of doors has extended to aircraft plywood. The reason — no compromise with quality — uniformity — craftsmanship — know-how. The process is no longer exclusive, but — the Guarantee Bond with which Roddis unqualifiedly backs each door made according to its standard construction, is an exclusive Roddiscraft feature.

PERMANENTLY WATERPROOF

Roddis construction fuses core, crossbanding, and veneer into a single unit — is absolutely waterproof.

FIRE-RESISTANT

Independent tests prove Roddiscraft solid-core flush veneer doors have high inherent resistance to fire.

SOUND-RESISTANT

Roddiscraft solid-core flush veneer doors offer much greater resistance to the passage of sound than hollow-core doors.

PERMANENTLY IDENTIFIED

The Roddiscraft red-white-and blue dowel — permanently establishes identity and responsibility.

UNQUALIFIEDLY GUARANTEED

All Roddiscraft doors, made in accordance with Roddiscraft standard construction, carry the Guarantee Bond.

FROM TIMBER TRACT TO BUILDING SITE —

It's Roddis All the Way

Roddis owns many years' supply of timber, does its own logging, sawing, cuts veneer in the largest hardwood plywood plant in the world — containing the largest hot-plate presses in the world, where 50 years of craftsmanship and know-how with wood, are applied in the manufacture of doors, wainscoting, and complete Door Units.

Roddiscraft
WAREHOUSES

229 Vassar St., Cambridge 39, Mass.
1440 W. Cermak Rd., Chicago 8, Ill.
457 E. Sixth St., Cincinnati 2, Ohio
2615 Latimer St., Dallas, Texas
2729 Southwest Blvd., Kansas City 8, Missouri
1201-5 S. 15th St., Louisville 10, Kentucky
Review and Greenpoint Ave., Long Island City, N. Y.
Marshfield, Wisconsin
4601 W. State St., Milwaukee 8, Wis.
515 W. 36th St., New York City 18, New York
727 N. Cherry St., San Antonio, Texas

DEALERS IN ALL PRINCIPAL CITIES

Roddiscraft

Roddis Lumber & Veneer Co.

MARSHFIELD, WISCONSIN

Installation "KNOW-HOW" built this Floor

Christian Brothers College, St. Louis, Mo., P. M. O'Meara & Associates, Architects

Nothing is more important to an architect than the knowledge and conviction that the materials he specifies will be installed in a craftsmanlike manner. Practically all building materials require application by skilled mechanics before they become useful as a part of the building.

It has often been said that an asphalt tile floor is just as good as the mechanic who installs it. Because we know this is a fact, we have exercised the greatest care in selecting approved contractors to sell and install our products.

Tile-Tex contractors are experienced floor men who employ mechanics that have asphalt tile "know-how." You can rely on product quality and on contractual responsibility when you specify Tile-Tex Asphalt Tile installed by approved Tile-Tex contractors—and remember that behind the performance of the approved Tile-Tex contractor, there stands the integrity and backing of The Tile-Tex Company.

★ **The Tile-Tex Company**

101 Park Avenue, New York City • Chicago Heights, Illinois

FOR BETTER BUILDING

(Continued from page 22)

RUST PREVENTION

An electro-chemical method of rust prevention is said to completely stop rust below the water level in tanks. By means of electrodes suspended in the water, low-voltage, low-amperage electric current prevents the corrosion caused by oxidation and builds up a protective hydrogen film on the exposed metal surfaces. This method, known as the *Rustop System of Corrosion Control*, may be applied to elevated tanks, pressure tanks, fire sprinkler tanks, stand pipes, wash water tanks, clarifiers, flocculators, sedimentation basins and filters.

The system can usually be installed without draining the tank or otherwise interrupting its service, and after the installation it is said the tank need never be drained for painting or removal of scale. The system is approved by the Associated Factory Mutual Laboratories and the Office of the Chief of Engineers of the War Department. Engineered and installed by the Electro Rust-Proofing Corp., Dayton 10, Ohio.

SELF-LOCKING NUT

An all-metal self-locking nut that needs no cotter pins or wiring to keep it in place, will soon be available to war industry and engineers and designers working on postwar projects, it has been announced. Strong, and able to withstand high heat temperatures, oil, or other disturbing elements that might affect proper functioning, the new nut is said not to jam the threads to fasten. It has full and undisturbed threads throughout the entire length of the nut. It will maintain its locking features, it is claimed, regardless of the number of times it is screwed on and off, and the self-locking principle will not injure the thread of either the bolt or the nut. Dzus Fastener Co., Inc., Babylon, N. Y.

SELF-FASTENING CONNECTOR STRIPS

Expected to be in production in the near future is a new strip for connecting sheet metal. Said to hold as securely as bolts, rivets or screws, this new *Sheetlock* strip can be used wherever sheets of metal are joined. It can be taken apart as easily as assembled, without injury to the strip or the sheet.

The Sheetlock strip is a double channel with indented louvers or notches, spaced uniformly at a 12° angle along the sides of the strip. Pro-

(Continued on page 120)

Progress Report - The Evolution of Miracles

◆ Progress may be evolutionary or revolutionary. These are relative terms. Evolution has been so long associated with Darwin and the descent (or ascent) of man that we have come to think of evolution in terms of eons. Yet both terms involve time. A "revolution" is the culmination of a long evolution of desire, thought, idea, and circumstance. We are still evolving through our "industrial revolution." Each new "revolutionary" invention is a step in the evolution of applied science.

◆ The manufacturers have now given us the facts which indicate the continuing, evolutionary progress in the development of building materials, equipment and techniques. Hundreds of innovations and changes are introduced each year and every year. War periods accelerate invention and the development of both products and processes. The need for rapidly-increased production brings new techniques, greater simplification, more standardization, and the adaptation of materials to new uses. These are reported every month in the architectural press for the information of the profession responsible for specifying their use. Long-established manufacturers are improving and expanding their products, constantly eliminating the less desired items, adding new ones to round out their coverage.

◆ These manufacturers realize too that *new* competition, as well as old, must be met. New plant capacity, managerial "know-how" built up by many firms for the production of war material will be converted to the building field, seeing there a prime opportunity for peacetime production and profit. Their fresh outlook, their ingenuity, engineering skill and production techniques will be applied to the development of building materials and equipment—mass-produced, efficient, standardized, uninhibited by craft traditions and customs, unencumbered by large investments in the past.

◆ Such stimulating competition between manufacturers, old and new, promises progress—more products, better products, relatively cheaper and more efficient products—which, when combined with the advanced designing and planning techniques of the architects, and engineers, and the executive skills of the contractors, will mean better buildings for every purpose.

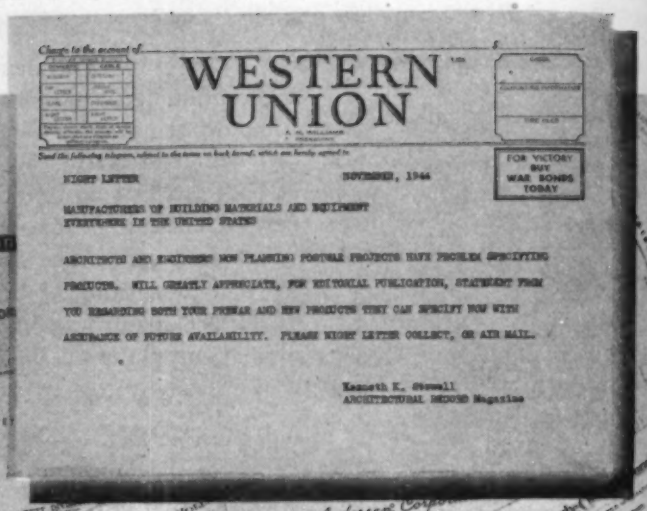
◆ When better buildings, more buildings, and different buildings have been needed, and needed fast, the building industry has risen to the task and has provided them. The diversified talents and techniques within the industry have made it adaptable, flexible, and quickly convertible to each and every urgent task. Know-how from the construction field has speeded the war, from the production of barracks and housing to munition plants, and even prefabricated ships. In the postwar building activity we can expect to see those same characteristics—flexibility and adaptability in organization, in administration and in design—ready and able to meet the demands for more and better buildings for every peacetime pursuit.

◆ The designers of buildings are constantly searching for new and better building products. Since reputation of the architect and engineer is at stake when the new products are specified and incorporated in buildings the designers must be convinced that the new material or equipment will perform as promised. That is why reliable manufacturers are testing, developing, redesigning and again testing under actual working conditions, the new products they will offer after the war. This way lies the soundest progress. Architects, builders and manufacturers are devoting their thought and efforts to the production of better buildings and to furthering this evolutionary process. It is their way of performing miracles.

Kenneth K. Stowell

EDITOR

PRODUCTS


WESTERN UNION
FOR VICTORY BUY WAR BONDS TODAY
NIGHT LETTER
NOVEMBER, 1944
MANUFACTURERS OF BUILDING MATERIALS AND EQUIPMENT
EVERYWHERE IN THE UNITED STATES
ARCHITECTS AND ENGINEERS NOW PLANNING POSTWAR PROJECTS HAVE PROBLEM SPECIFYING
PRODUCTS. WILL GREATLY APPRECIATE, FOR EDITORIAL PUBLICATION, STATEMENT FROM
YOU REGARDING BOTH YOUR PREWAR AND NEW PRODUCTS THEY CAN SPECIFY NOW WITH
ASSURANCE OF FUTURE AVAILABILITY. PLEASE WIRE LETTER COLLECT, OR AIR MAIL.
Kenneth K. Stowell
ARCHITECTURAL RECORD Magazine

STRUCTURAL MATERIALS AND SYSTEMS

FINISH MATERIALS

PLUMBING AND SANITATION

HEATING AND AIR CONDITIONING

ELECTRICAL AND LIGHTING

KITCHEN EQUIPMENT

OTHER BUILDING PRODUCTS

FOR POSTWAR PLANS

255

Answers to your questions about what can be specified now for the projects you are planning, and will plan, to be built as soon as restrictions are lifted. Leading manufacturers, replying to Architectural Record's wires for authoritative information, here summarize their definite plans for providing the products you can incorporate in your blueprints now

WHAT can we specify now for postwar projects? What can we incorporate in our plans and on our working drawings, with assurance that the materials or equipment will be available when bids again can be taken? How different and radical will the new materials and devices be? Architects have been asking us these questions with growing urgency. Clients have sought assurance from their architects when discussing planning now. Both want the facts.

ARCHITECTURAL RECORD has gone directly to the producers, to the manufacturers of building materials and equipment, to get these facts about their products and their future programs. Two hundred and fifty-five company presidents or other top executives have responded with direct and official statements of the essential facts regarding their plans for production of materials for postwar building. The list of producers is representative and highly significant, covering as it does all phases of building, all types and kinds of materials and equipment. As our survey is extended, additional facts will be presented.

The replies here presented, although necessarily edited down to the bare essentials of their import, are sufficient to prove the trend in no uncertain terms. They provide a firm basis for preparing plans and specifications *now* for buildings to be built as soon as war controls are relaxed. They give assurance that the most desired time-tested, familiar materials and equipment will be available as fast as manufacturers can get back into full production: Such products will be the first available and will insure sound buildings with known qualities. Many of these products will be improved, modified for increased efficiency, durability and attractiveness. Innovations of more radical nature in materials or design will, for the most part, come later, after periods of development, research, and testing in laboratory and in the field (activities which have been suspended or drastically limited in extent in these war years).

The building industry has gone to war. The producers of building equipment have, in many cases, gone all-out to provide necessary equipment for army, navy or air forces. Most of these firms can and will reconvert very quickly to produce building products. As restrictions are gradually being relaxed, manufacturers begin to build inventories to be ready to meet all demands with all possible speed. Lack of space (and paper) has made it necessary to omit all references to, or accounts of, the spendid achievements of the manufacturers in war work.

For convenient reference, manufacturers' statements are arranged on the following pages in alphabetical order under seven main general headings indicating the functional category of the principal products of the manufacturer —viz., Structural, Finish, Electrical, Heating, etc.

PRODUCTS FOR POSTWAR PLANS

STRUCTURAL MATERIALS AND SYSTEMS

THE familiar materials, steel, wood, cement, brick, terra cotta, stone, glass, gypsum, etc., will be produced as before the war and according to present day standards and specifications. Greatest single development to be expected is modular dimensional coordination and standardization. The 4 in. module seems destined to be adopted universally and rapidly. The adoption of the metric system, although strongly advocated, is more difficult of attainment for obvious reasons. Lumber will be our most critical material for the duration. Prefabricated panel systems, with or without integral insulation, will increase in importance. Laminated timber engineering opens up wider fields for its use. More extensive use of light metals depends on competitive costs for specific purposes. Welding, so extensively used in war work, will be more extensively used in building construction. Synthetic resins (plastics) will be available as binders and impregnators in new structural materials, and as insulation. Present structural handbooks, catalogs and specifications can be used with assurance. Metal windows and their wall enframements will be dimensioned according to the new modular standards.

ALBERENE STONE CORP. OF VA.

There will be ample production of stone in the postwar period. Several new and more interesting finishes have been developed. . . . J. L. Kretzmer

ALLIED CHEMICAL AND DYE CORP.—BARRETT DIVISION

Roofing and waterproofing line of products has been and is available at present time. As new products are developed they will be announced to the trade.
E. J. Elliott

ALUMINUM CO. OF AMERICA

Aluminum is available in every useful form to the building trades. Newer finishes include colors applied by means of Alumilite. We expect expansion in the use of aluminum for many parts of building as extensions of postwar uses, many using modular dimensioning system. . . . Robert B. McKee

AMERICAN LUMBER & TREATING CO.

There have been refinements made in methods of production which have been incorporated in plants producing for military use, and will remain as part of these plants.
R. B. Putman

AMERICAN ROLLING MILL CO., THE

Most prewar products will be available to the architect. Information is now available in Sweet's catalog. . . . D. H. Malcom

ANDERSEN CORP.

Improved window units will be included in our postwar line. We are now developing a new postwar double hung window to supersede the victory unit, but information is not yet available. . . . Donald Wilson

BARBER-COLMAN

See Heating and Air Conditioning

BENNETT-IRELAND

Architects can plan for the use of Bennett fireplace equipment so far as size or general details are concerned, as improvements will be internal. . . . C. B. Barradale

BETHLEHEM STEEL CO.

Steel products will be improved and should be specified according to our current catalog and handbooks. . . . J. C. Long

BIRD & SON

Our prewar line will be available for postwar construction. We are working on postwar products but they are not ready for announcement. . . . A. C. Berglund

CARR, ADAMS & COLLIER CO.

Popular prewar windows, cabinets, entrances, etc. have been redesigned, reviewed, and improved. We are adding many new designs to complete the Bilt-Well line.
A. E. Stoltz

CECO STEEL PRODUCTS CO.

All prewar products will be available. Doors and windows will be changed in types and sizes to conform with module system.
Ned A. Ochiltree, Executive Vice President

CELOTEX CORP.

See Interior Finishes

CERTAIN-TEED PRODUCTS CORP.

Architects may now specify all of our company's varied prewar line of building materials with every assurance of both present and future availability. New developments include gypsum roof decking and corrugated asphalt siding.
Rawson G. Lizars

CHARTER OAK STOVE & RANGE CO.
A subsidiary of Reynolds Metals Co.

Process Cotton and aluminum foil insulation will be available after the war and may be specified. We have several other products that are in the development stage that we are not in a position to release at the present time.
F. E. Parsons, Vice President

CREO-DIPT CO., INC.

Postwar products will be substantially the same as prewar, with improvements. There will be available Creo-Dipt Double Wall Zephyrs, with Zephyr Insulation Backing Board. . . . L. J. Leatzaw

CRITTALL-FEDERAL, INC.

In postwar period we will produce the same general line of steel windows and doors as before the war. Types and sizes of windows will be changed and will appear in Sweet's. . . . W. M. Martin

W. D. CROOKS & SONS

There will be no appreciable change in construction of hardwood doors. Our complete information is available in Sweet's.
Oliver N. Crooks

CURTIS COMPANIES, INC.

Following cessation of hostilities our present line of woodwork will be available in quantities measured by the supply of lumber and labor. New designs will largely parallel old designs in size but will embrace some new sizes and many refinements.
E. J. Curtis, Vice President

C-W PLYWOOD CO.

See Finishes

DAHLSTROM METALLIC DOOR CO.

We have no comments to make at this time relative to postwar or new products.
Paul N. Anderson, President

DOUGLAS FIR PLYWOOD ASS'N.

Douglas fir plywood continues to be made according to U. S. Dept. of Commerce Standard CS 45-42 in exterior and interior types. War-reared plywood products are extra-large panels, plastic-surfaced panels, and paper-faced veneer. . . . Charles E. Devlin

DOW CHEMICAL CO.

See Finishes

W. E. DUNN MFG. CO.

Litho bar joists are now available. In the postwar period we will provide national distribution. . . . W. E. Dunn, President

ELLISON BRONZE CO., INC.

Improved and prefabricated Ellison balanced door units will be available in aluminum first, then bronze, then stainless steel. Information filed in 1945 Sweet's.

MICHAEL FLYNN MFG. CO.

Our types and sizes of windows will conform to new modular designs.
T. M. Forscht

GENERAL BRONZE CORP.

All of our prewar metalwork will be available in considerable quantities in the postwar period. . . . Herbert L. King

HANLEY CO., INC.

We are making available modular size face brick, and have available a low-priced ceramic glazed brick and tile.
W. L. Hanley, Jr., President

HARBOR PLYWOOD CORP.

I do not think that anything definite can be stated at this time.
E. W. Daniels, President

HOLZER CABOT DIVISION—FIRST INDUSTRIAL CORP.

We are working on extensive plans covering postwar products. However, it is impossible to give any statement for publication at this time. . . . G. J. Rick

HOPE'S WINDOWS, INC.

Our postwar windows will be practically the same as our prewar windows except that we expect to change all our standard sizes to conform to the 4 in. modular system.
Walter Wilson

HORN MFG. CO.

Architects may freely specify equipment based on the specifications shown in Sweet's catalog. Sale of bleacher equipment is prohibited at present time but will be available after the war. . . . Frederic G. Horn

HYDRAULIC-PRESS BRICK CO.

When labor is released, clay building products should again become generally plentiful. . . . George A. Bass, President

INDIANA LIMESTONE CORP.

Architects can specify limestone with full assurance that it will be available. There is a substantial inventory of seasonal quarry stock. . . . L. P. Corey, Vice President

PRODUCTS FOR POSTWAR PLANS

INTERNATIONAL NICKEL CO., THE

As soon as restrictions are lifted, our materials which were used in the past will continue to be used in postwar period. Monel metal and other Inco alloys will be available to the building field.

F. A. Sansom

INTERNATIONAL STEEL CO.

We expect to have some improvements in our doors and our steel products as we intend to do considerably more welding in postwar work. Our steel buildings will be more portable. Contemplated also is a lift type door for hangars. . . . R. R. Carnes

JAMISON COLD STORAGE DOOR CO.

We will have postwar improvements and designs in cold storage doors available for civilian use. . . . J. V. Jamison, Chairman

KAWNEER CO., THE

We are not in a position to provide specific information concerning our postwar products. We will keep you informed on the many exciting new designs we are now working on and expect to have ready as soon as restrictions are lifted.

James B. Carse

KEASBEY & MATTISON CO.

An architect today can, with full assurance, specify any prewar K&M products with the knowledge that it will be available in the same, or improved, form with the coming peace. Considerable research work is being done on new and improved asbestos products. . . . J. H. Dingee

KIMBERLY-CLARK CORP.

See Finishes

KINNEAR MFG. CO., THE

We are proceeding with our products on the prewar basis and have plans for postwar projects. However, information at the present time cannot be released.

H. H. Nutter, Vice President

LIBBEY-OWENS-FORD GLASS CO.

We are now manufacturing products which would be for civilian postwar use.

G. P. MacNichol, Jr.

LUDOWICI-CELADON CO.

In postwar period, new tile patterns already developed, having particular appeal to the moderate-cost housing field, will be put in production. . . . J. S. Griffin

R. C. MAHON CO., THE

Rolling steel curtains, grilles, and steel roof deck will be ready for postwar projects.

W. F. Sheetz, Vice President

MASTER BUILDERS CO., THE

We have developed improvements that will mean stronger and more durable and more watertight concrete structures at lower costs in postwar buildings.

E. L. McFalls, Vice President

MEDUSA PORTLAND CEMENT CO.

All prewar materials will be available for the postwar period. We are perfecting new products which will not be ready for several years after the war.

P. G. Dawson, Vice President & Treasurer

MENGEL CO., THE

Flush doors and kitchen cabinets will be available after the first of the year in improved form.

MESKER BROTHERS IRON CO.

Prewar steel window sizes and designs will be discontinued at an early date in favor of the new modular system being developed for the industry.

John B. G. Mesker, Vice President

INSULITE DIVISION—MINNESOTA & ONTARIO PAPER CO.

New products will be brought out after more complete laboratory research. Current products are fully listed in Sweet's catalog.

C. T. McMurray, Vice President

MONARCH METAL WEATHERSTRIP CORP.

By January 1, we will again be producing Metalane weatherstripping. Brass extrusions are still restricted. Our postwar planning includes a new product to us, namely, ventilators for glass block construction. Equipment for immediate sale is listed in Sweet's catalog. . . . A. Naughton Lane, Vice President

MORGAN COMPANY

Authentic woodwork and regular standard stock lines, with additions, will be available to the architect. A new catalog will be issued this fall or winter. . . . C. C. Petri

NATIONAL ASS'N OF ORNAMENTAL METAL MFGRS.

With aluminum, magnesium and steel again available there will be no shortage of architectural miscellaneous and ornamenta, metal work. . . . O. J. Condon

NATIONAL FIREPROOFING CORP.

We anticipate no radical changes in our building products nor in building construction in general, at least in the immediate postwar years. No architect need hesitate in specifying any of our products that he specified before the war.

A. S. Brewer, Vice President

NATIONAL GYPSUM

See Finishes

NATIONAL MFG. CO.

We do not expect to make any radical changes in our regular line of hardware.

F. B. Kennedy

NORTON DOOR CLOSER CO.—DIVISION OF YALE & TOWNE MFG. CO.

During the immediate postwar period will probably make the same products that we did in 1939. Of course our development and engineering departments are busy planning and testing new and improved models.

Willard Becker

NORTON LASIER CO.

Design changes and new products will not be attempted until some of the pent-up demand has been satisfied, although many new manufacturing processes and techniques will be applied to the old products.

W. J. Hodge, Vice President

OWENS-CORNING FIBERGLAS CORP.

Prewar Fiberglas materials and various forms of insulation, filters, and textiles, will continue to be available for postwar building, and may be specified. Announcement of new postwar products is reserved for later. . . . Tyler Stewart Rogers

OWENS-ILLINOIS GLASS CO.

Glass block items are available today and those that will be available immediately following the war are substantially the same. Blocks have been improved during the war to give better light and strength characteristics. Sweet's current catalog is up to date.

H. W. Paul

PAINE LUMBER CO.

Rezo hollow core construction is adapted for use in cupboard doors, table tops, and similar items, as well as the usual flush door. Complete data is found in the latest issue of Sweet's catalog.

Mark Whittlesey, Vice President

THE PEELLE CO., INC.

Peelle-Richmond Products will be available as listed in Sweet's catalog.

P. R. Saurer

PITTSBURGH CORNING CORP.

Our PC Glass Blocks and PC Foamglas are now and certainly will continue to be available. The glass blocks which we are now manufacturing are of the same specifications and construction as those manufactured before the war. . . . H. R. Haynes

PORTLAND CEMENT ASS'N.

Architects and engineers now planning postwar projects may specify Portland cement, for all types of concrete construction, both plain and reinforced, and all types of concrete products now made with Portland cement with full assurance of availability.

Frank T. Sheets, President

PROTEXOL CORP.

Architects may specify now for future work. Present line and a new surface application information available in Sweet's catalog. . . . Ralph R. Murray

REPUBLIC STEEL CORP.

All Republic prewar products may safely be specified by architects for postwar projects. No radically new products for the building field are contemplated though there will be improvements. . . . L. S. Hamaker

REYNOLDS METALS CO.

The information in Sweet's catalog is complete and the architect may specify from it. . . . Donald G. Dunn

RODDIS LUMBER AND VENEER CO.

Solid Core Flush Veneered Doors, Protex fireproof door, fully waterproof plywood, and the new prefabricated door units will be available after the war. . . . H. C. Jensen

ROLSCREEN CO.

Pella casements, Rolscreens, and venetian blinds will be available, and may be specified now.

RUBEROID CO.

See Flooring

RUSSELL & ERWIN MFG. CO.

Present limitation orders permit manufacture of low-priced stock items only. As to new products we have many things up our sleeve but cannot disclose details at this date. . . . Isaac Black

SAMSON CORDAGE WORKS

Our spot cord can be specified now with assurance of its being available when required. . . . R. G. Whiting

SARGENT & CO.

Intend to use the same materials and line as before the war. Architects can specify the prewar line and be assured of availability. . . . H. J. Crawford

SEAPORCEL PORCELAIN METALS, INC.

We will be in a position to supply architects with our material, same as manufactured in prewar days. We are also manufacturing a more tenacious porcelain known as "Seaporcel." . . . Marvin Fine

SOSS MFG. CO.

We plan to make our complete line of Soss Invisible Hinges when the war is over. We are also working on new products but none of them is far enough along to be made public. . . . Samuel Soss, Vice President

PRODUCTS FOR POSTWAR PLANS

STANLEY WORKS, THE

Butts, hinges, and kindred lines, also track and hangers are still available and will be for postwar construction. Architects planning postwar projects should avail themselves of our catalog in 1944 Sweet's. . . . R. W. Chamberlain

STRAN STEEL DIVISION—GREAT LAKES STEEL CORP.

It is our plan to continue in the postwar with the well-known Stran Steel lightweight steel framing system, standardized and greatly improved. . . . J. E. Bowen

TIMBER ENGINEERING CO.

Prewar Teco timber connectors and termite shields will be available. We have built a Product Shop and Wood Chemistry Laboratory for testing and research. Harry G. Uhl

TIMBER STRUCTURES, INC.

Modern wood roof trusses, complete wood buildings, laminated wood arches and beams, odd or irregular patterns, and fireproofing timber treatment are and will be available. . . . Ward Mayer, President

U. S. GYPSUM CO.

U. S. Gypsum will be able to supply all of the major building products which were offered in the prewar years. New products now in development stage will be announced when field tests have shown the advantages of these new materials. Sweet's Catalog gives current information and data for specification writing. . . . Jack Maynard

UNITED STATES STEEL CORP.

Basic postwar products will parallel those of prewar period with improvements in steel quality and increased flexibility. C. R. Moffatt

U. S. PLYWOOD CORP.

See Interior Finishes

UNIVERSAL ZONOLITE INSULATION CO.

Our standard products, Vermiculite, granular fill insulation, insulation concrete aggregate, insulating plaster aggregate, and our new prefabricated sectional stack will be available after the war. Thomas H. Coulter, Vice President

VERMONT MARBLE CO.

We have large reserves of marble. Our facilities are, or will be, ample. D. H. Bixler, Vice President

VON DUPRIN DIVISION—VONNEGUT HARDWARE CO.

We will probably cut back on our long line of products. Architects should call in the Architectural Hardware Consultants in their city. . . . C. J. Prinzler

WHEELER OSGOOD CO.

We plan to produce various type doors and jambs which we believe architects could now specify and feel reasonably sure of actual delivery. Norman O. Cruver, Vice President

WOOD CONVERSION CO.

Balsam-Wood and Nu-Wood are now available and will be available after the war. We do have some new products which will be released later. . . . E. T. Holmgren

YOUNGSTOWN SHEET AND TUBE CO., THE

Our program at the moment does not contemplate new products during the postwar except those that will develop in the natural course of events. Frank Purnell, President

FINISH MATERIALS

FINISH materials showed rapid progress prior to the war both in type and variety of textures, and from the various replies it is evident that this progress will continue. These changes, however, need not affect present specifications for postwar buildings. Any necessary changes can be made easily and quickly as working drawings are not affected. Several companies intend to introduce improved finishes in the near future. Laminates for surface systems will be available in increased variety. Wallboards will generally increase in size. New paint products will be introduced, many involving synthetic resins in their formulas. Plastics will be used in extruded and moulded shapes, in trim and small objects, as well as in larger laminated or impregnated forms such as shower stalls. However, the architect will still be safe in specifying prewar products—after the war he will have some additional selections to choose from.

AMERICAN MAT CORP.

We will furnish same products as in prewar period. Our new developments include flexible wood link matting, and a plastic-friction mat. These can be obtained now without priorities. . . . D. W. Moor, Jr.

ARMSTRONG CORK CO.

Armstrong will continue quality improvements on its products. No changes now contemplated are of such radical character as to concern architects currently specifying our products for postwar construction. H. W. Prentis, Jr., President

BARCLAY MANUFACTURING CO.

Barclay coated panels will be improved in surface coating for greater durability, wider range of colors. Sizes will be the same as prewar. Sweet's file will give up-to-date details.

BIGELOW SANFORD CARPET CO., INC.

Range of fabrics, patterns, and colors will be below prewar to secure maximum production in first postwar year, during which we do not expect to produce any new fabrics.

FREDERIC BLANK & CO., INC.

Results of research and development of improved postwar fabric wall and ceiling covering cannot be definitely announced now. Architects should consult their suppliers. . . . Frederic Blank, President

E. L. BRUCE CO.

Our former hardwood floor line will be augmented by new products now in development and test stages. Announcement will be made when form and quantity of proved products are determined. C. Arthur Bruce, Vice President & Secretary

CAMBRIDGE TILE MFG. CO.

Since reconversion problems are minor, Suntile can be specified for delivery shortly after restrictions are raised. New Suntile products in development stage will be released later. . . . C. H. Burchenal, President

CELOTEX CORP., THE

Are now producing for regular trade outlets, but in reduced quantities, our present line of structural, acoustical, asphalt, gypsum, and multiple-function products. New line of improved finishes on Celotex products will be introduced in the near future, but other new products will not be ready in immediate postwar period. B. G. Dahlberg, President

CONGOLEUM-NAIRN INC.

Linoleum can be specified by architects with complete assurance that they can secure linoleum for floor and wall requirements immediately in postwar period. R. K. Austin

C-W PLYWOOD CO.

Inderon, a product combining plywood and laminated plastic, will be available, and may be specified by architects. . . . R. J. Willis

DEVOE & RAYNOLDS CO., INC.

Present formulations conform to government regulations. Research division has produced products suitable for postwar use which cannot be disclosed at this time. Prewar specifications can be used with assurance. . . . E. F. O'Callaghan

DOW CHEMICAL CO.

In the postwar era we feel that the use of plastics in architecture will be tremendously broadened. Our present schedule calls for new wall coverings, new materials, paints, and wood finishings. Magnesium products will be used for lightweight "I" beams and extruded sections. Willard H. Dow, President

E. I. du PONT de NEMOURS & CO., INC.

Expect to reinstate all prewar finishes now restricted by war. Architects should specify in accordance with prewar experience. Definite specification information on new postwar finishes cannot be given now. W. M. Zintl

E. I. du PONT de NEMOURS & CO., INC.—"FABRIKOID" DIVISION

Architects can specify "Tontine" with assurance of future availability. They can also specify Triplex Quality "Tontine" which we will introduce for postwar hotels and institutions requiring lightweight, lightproof shade cloth. . . . Frank R. Price

EASTMAN KODAK COMPANY

Research and production plans of the Tennessee Eastman Corporation anticipate postwar expansion of the uses of Eastman plastics in the architectural field. R. C. Tuttle

FIRESTONE TIRE AND RUBBER CO., THE

Velon screening and coated wall fabrics,

PRODUCTS FOR POSTWAR PLANS

Various plastic products including paneling, flooring and hardware, and Foamex are some of the materials that will be available to architects after the war. . . . **W. D. Hines**

B. F. GOODRICH CO.

Prewar products may be specified with assurance that they may be had after the war. "Koroseal," a new plastic base wall covering will also be available.

JOHNS-MANVILLE SALES CORP.

The entire Johns-Manville line of built-in materials with which architects are familiar will continue to be available. Detailed information about these products is now in Sweet's file. We anticipate announcing certain improvements in many products from time to time postwar.
L. M. Cassidy, Vice-President

DAVID E. KENNEDY CO.

Kentile products have been continuously available in wide range throughout war period. Will be increased, with entire prewar range, after V-E Day. Kencork, improved, will be available when war requirements slacken.

KIMBERLY CLARK CORP.

Kimsul insulation now readily available, as formerly. Kimpreg plastic surfacing material soon to be introduced.
R. B. Sawtell

KOPPERS CO.—TAR AND CHEMICAL DIVISION

Koppers Coal Tar Pitch and Koppers Tar Saturated Felt for built-up tar roofs now available, also waterproofing materials. Are now introducing Koppers Mastic Flooring Compound. . . . **G. C. Stephenson**

MAJESTIC CO.

Majestic building products shown in current Sweet's are essentially same as will be available for postwar building.

MARTIN-PARRY CORP.

Prefabricated and predecorated steel partitions and Metlwal paneling products will be available for civilian use, when steel is released. . . . **T. R. Hill, President**

MILCOR STEEL CO.

We can assure architects of almost immediate availability of our prewar products including metal trim, lath, corner bead and all accessories, when war restrictions are lifted. . . . **W. B. Turner**

MILWAUKEE STAMPING CO.

Standard prewar Ferrometal Partitions will be duplicated postwar. Addition of the Kelly Octo arrangement will be announced shortly. All standardized plans are based on 4 in. module. . . . **A. C. Nickel**

MILLS CO., THE

WPB restrictions on use of steel for toilet partitions have been eliminated and can therefore be specified with assurance. Further relaxation of WPB orders will remove limitations on Mills Metal Office Partitions. . . . **Bert J. Graham**

MONSANTO CHEMICAL CO.

Our plastic materials will, in general, be specified not as such but in the form of semi-finished or finished products made by our customers. . . . **F. A. Abbiati**

NATIONAL GYPSUM CO.

National Gypsum Co. has no reconversion problem, and all plants are operating on all gypsum products. They have been geared up to move into unprecedented volume production when restrictions are lifted, and will be ready to handle any foreseeable demand with standard products.
R. F. Burley, Vice-President

RUBEROID CO., THE

The full prewar line of Ruberoid asphalt, asbestos, and insulating products can be specified by architects now, with assurance of future availability of new products. Now available are Air-Vent (perforated) felt and Stonewall board. Other new products will be available when restrictions are lifted, including Timbergrain asphalt shingles and Vitramic siding. . . . **S. P. Moffet, Vice-President**

SHERWIN-WILLIAMS CO., THE

A large percentage of regular products are now available in reasonable quantities. Our suggestion is that, on postwar projects, architects specify directly from our Architectural Handbook and Specification Guide in Sweet's. Our standard finishing products should be available postwar in time for application on structures. . . . **H. S. Prescott**

SISALKRAFT CO., THE

Sisalkraft and Copper Armored Sisalkraft will, as now, be nationally distributed. Architects can specify these products now with complete assurance of future availability. . . . **E. H. White**

SLOANE-BLABON CORP.

You may assure architects they can specify Sloane-Blabon products for any postwar project. We will be ready to deliver full line in variety of patterns and colors. Standard products will be available first in quantity. . . . **Houlder Hudgins, President**

ALEXANDER SMITH AND SONS CO.

Architects will be forced for some little time after the war to consult their regular sources of supply to ascertain just what rugs are available in stock, or in the process of production in the mills before they can, with any degree of assurance, enter their choice in the specifications.
W. D. Gardner, Vice President

U. S. PLYWOOD CORP.

There are numerous improved plywood products, and some new ones. Our entire prewar line, with the exception of Fir plywood is obtainable now without priority. Our new products are not sufficiently developed for revelation at this time.
Lawrence Ottinger, President

UNITED WALLPAPER INC., and TRIMZ CO.

Our wallpaper is now available nationally in limited quantities and can be specified now by architects with the assurance of future availability.

WIREMOLD CO.

No information is available at the present time.

HEATING AND AIR CONDITIONING

Most contemplated changes in heating and air conditioning equipment center around modifications to produce internal efficiency and engineering for more economical production; therefore, they do not seriously affect plans and working drawings, nor specifications. Present manufacturers' information can safely be used in planning buildings now. Any dimensional changes will probably be in slight reduction in sizes rather than increases, and plans should be made on that assumption. Improvements in automatic and flexible heat controls have already been announced. Increased insulation and insulating-double-glass make competent engineering of the whole heating and air conditioning system most important. Utilization of solar radiant energy through large glass areas increases need for flexibility and automatic quick-acting controls of heat supply. Developments in radiant heating systems demand consideration in planning future buildings.

AEROFIN CORP.

After the war we will have available all of our prewar coils with an added, improved non-freeze type of coil. . . . **M. Noble**

AMERICAN RADIATOR & STANDARD SANITARY CORP.

Postwar products will most likely be 1942 models which were excellent in every manner. New or postwar products are in the paper stage. . . . **C. B. Nash**

AMERICAN STOVE CO.

Immediate postwar products will be same as prewar with minor changes not affecting specifications. . . . **Arthur Stockstrom, President**

ANCHOR POST FENCE CO.—FLUID HEAT DIVISION

Within a year or so after permission is granted to manufacture oil burners, we will be in a position to market a new and improved product. . . . **M. J. Donahue**

BARBER-COLMAN CO.

All of our equipment can be safely specified now for postwar projects, with the assurance of future availability. Improvements in some of the old designs, and some altogether new ones, will be offered.
C. J. Braatz

BASTIAN-MORLEY CO., INC.

Our gas and electric water heaters are either currently available or will be available within the next few months.
F. W. Edgerton

BELL & GOSSETT CO.

Our current prewar catalog is safe guide for postwar specifications. New developments will be announced as the postwar months unfold, but are not ready for specification now. . . . **Malm**

R. C. BRETH, INC.

Unit Heaters, coils, and fin sections can be specified with assurance of delivery.
R. C. Breth, President

BURNHAM BOILER CORP.

No new products will be available immediately after the war, neither will all of our prewar products be available.
J. Balter

PRODUCTS FOR POSTWAR PLANS

CARRIER CORP.

We will offer a full line of freon refrigeration and air conditioning equipment. Architects have assurance of availability as soon as WPB removes restrictions and materials become available. . . . E. T. Murphy

CHRYSLER AIRTEMP—CHRYSLER CORP.

We are in a position to offer full line of automatic heating equipment for all fuels and a revolutionary year-round air conditioning system. In the postwar period we will specialize on controlled indoor climate.
C. W. Russell, President

CLEAVER-BROOKS CO.

Steam generators, oil fired, 15-500 H.P. for 15-200# W.P., available. Also available are mobile steam generators or tank car heaters. Refer to Sweet's catalog for complete specifications. . . . R. A. Buechner

COLEMAN LAMP AND STOVE CO., THE

We are making some heating equipment now, and will have available numerous new pieces of heating equipment after the war.
A. W. Boyer

DELCO APPLIANCE DIVISION—GENERAL MOTORS CORP.

Available in the postwar period will be an even more complete line of all types of automatic heating equipment. Models have been redesigned with emphasis on smaller, more compact lines with highly efficient operation. . . . M. L. Judd

DRAVO CORP.

Heaters will be available without radical design changes in the foreseeable future.
V. B. Edwards, President

C. A. DUNHAM CO.

Release of new heating equipment will depend upon how soon and to what extent the present restrictions on materials and manufacturing are removed. A round-the-year heating and cooling system has been developed, also a central gas-fired home heating unit with special burners and controls. . . . Oliver J. Prentice

FEDDERS MFG. CO.

Unit heaters, heating coils, water coolers, walk-in refrigerators, are either available at this time or will be available in the postwar period. . . . C. E. Scott

FITZGIBBONS BOILER CO., INC.

This company is not yet ready to announce any of its postwar plans or products.
Paul K. Addams, Executive Vice President

FRICK CO.

We expect a rapid widening of the field for refrigerating, air conditioning, and ice-making equipment. . . . Terry Mitchell

GENERAL ELECTRIC CO.

Products available immediately after the war will be similar to the products known before the war, except that they will be of more advanced design. The trend in air conditioning, commercial refrigeration, and automatic heating equipment is toward greater compactness, lower weight, simpler installation and greater operating efficiency. Architects should base plans for postwar period on heating and air conditioning equipment available in 1941.
R. C. Lindblom

HOFFMAN SPECIALTY CO.

We have nothing at this time in the way of new products that we are ready to announce. . . . Potter Bowles, President

ILG ELECTRIC VENTILATING CO.

ILG apparatus as listed in our present catalogs will be available. Also new products being developed will be announced soon. . . . P. D. Briggs, Vice President

KEWANEE BOILER CORP.

Architects may specify any or all of our prewar products, and any new products as shown in Sweet's. . . . R. B. Dickson

MASTER ELECTRIC CO., THE

We have designed new heating controls for the postwar market that will be more sensitive, more positive, smaller and more compact than the Heat Regulators of the past and will be arrayed in modern lines of beauty. . . . H. R. Eicher

MERCOID CORP., THE

It is our opinion that the products immediately available after the war are going to be very much those with which we left off before the war. New controls are under development. . . . H. Courteol, President

MINNEAPOLIS-HONEYWELL REGULATOR CO.

We have approximately 500 products which were manufactured before the war and with improvements will be ready after the war. Architects will be particularly interested in Moduflow. . . . Wm. B. Hutchinson

MODINE MFG. CO.

The Modine convectors being presently offered are of types and of dimensions that we will continue to offer during the immediate postwar period. . . . Owen Desmond

L. J. MUELLER FURNACE CO.

We are now in production on most items in our power line of heating and air conditioning equipment. We also have several new heating units completed and ready for production. . . . Aase

NATIONAL RADIATOR CO., THE

We will continue to manufacture in the postwar era a complete line of cast iron and steel boilers—refinements and additions to our line of products will be offered in the postwar era. . . . Paul B. Holmes

HERMAN NELSON CORP., THE

Architects can specify current products with the assurance that these products will not become obsolete with the end of the war. There will be continuous improvements, but it will be possible to incorporate these in current construction.
Robert W. Nelson, Vice President

JOHN J. NESBITT, INC.

Prewar heating, ventilating, and air conditioning products are now available in a limited number of types and sizes. In the postwar period a complete prewar line will be available, augmented by new products in this same field. . . . Albert J. Nesbitt, President

PAYNE FURNACE & SUPPLY CO., INC.

We will resume the manufacture of our prewar models, and will be able to incorporate improvements. In addition to this our research department will develop such changes as may be deemed advisable for the immediate postwar market. . . . R. V. Hiatt

PETROLEUM HEAT AND POWER CO.

Our postwar manufacturing plan is to resume as quickly as possible the production of practically everything that was in our prewar line. Improvements are not of a character that will change capacity or operating characteristics of our prewar products. . . . J. F. Corrigan

FRANK PROX CO., INC.

No change contemplated in our present products for postwar projects. Boilers as listed in our current catalog can be specified with definite assurance of future availability.

RICHMOND RADIATOR CO.

Architects can proceed with drawings and plans using prewar roughing in measurements with assurance that postwar products will fit, both as to connections and space allotted. . . . G. D. Andrews

RUUD MFG. CO.

It is our intention to return to manufacture of our general line as soon as we are permitted to do so, and the new models will reflect engineering advances.
M. M. Scott

SERVEL INC.

In the immediate postwar period we will produce the same gas refrigerator as we did prior to May, 1942. Gas air conditioner and water heater specifications are available now. . . . Louis Ruthenburg, President

STAINLESS & STEEL PRODUCTS CO.

Architects can specify furnaces and heaters in our present line for delivery after January 31, 1945. . . . W. W. Bowen

B. F. STURTEVANT CO., INC.

We expect to manufacture in the postwar practically all of the lines that we offered in the prewar days. The new products developed for the postwar will include a complete line of fans and the Sturtevant air blender. . . . J. C. Thompson, Vice-President

SURFACE COMBUSTION CO.

Architects should specify prewar current modified models for plans now on boards, for immediate postwar requirements.
J. Grover

TIMKEN SILENT AUTOMATIC DIVISION — THE TIMKEN-DETROIT AXLE CO.

Timken will again offer a comprehensive line of oil heating equipment for residential use. Of greatest importance to architects will be a new line of oil fired forced air furnaces. . . . T. A. Crawford

TRANE CO., THE

We believe we have solved the problem that architects face in specifying products for postwar projects. We will make available in November an extensive bulletin showing all of the equipment that we will have available immediately after the European war is over. New products will have to await further development.
Ferdinand Sontag

U. S. AIR CONDITIONING CORP.

Enlarged refrigeration and evaporative cooling units for commercial field and a new line of backwardly curved blowers will be made as a result of new developments and improvements made in production.

WARREN WEBSTER & CO.

Architects should have no difficulty specifying, since equipment is now available and fully cataloged. Sweet's 1944 and 1945 catalogs will contain adequate information.
B. F. Lerch

WESTINGHOUSE ELECTRIC ELEVATOR CO.

Our plans for immediate postwar production of air conditioning equipment contemplate that we will have available for sale and shipment air conditioning equipment very similar to our last prewar production.

Relatively minor changes in design and construction will be apparent. Larger air conditioning equipment will be available. **L. Gale Huggins**

WILLIAMS OIL-O-MATIC HEATING CORP.

Complete line of burners, heaters, boilers, and air conditioning equipment will be available. . . . **C. W. Cornelssen**

PLUMBING AND SANITATION

PRESENT standards and equipment seem destined to prevail in early postwar years. Plumbing codes are slow to change and no radical improvement in sanitary engineering is possible under some existing codes. Plumbing sections and layouts will be as prewar, in accordance with local codes. Present sizes of fixtures will remain and can safely be used in planning now. Changes in fixture and accessory design will not be such as to affect specifications materially, insertion of a new catalog number will be all that is involved if latest models are to be called for when taking bids. Developments for the future include reduction of weight, noncorrosive alloys, piping sub-assemblies, increased use of more flexible tubing and simplified joints.

AMERICAN BRASS CO., THE

Copper, brass, and bronze, essential to the building industry will be available at once as soon as authorized by government relaxations. Architects should not hesitate to specify as the products will be essentially the same as before the war.

AMERICAN-MARSH PUMPS

Architects and engineers specifying American-Marsh equipment may rest assured that all of our standard lines are available now, and will also be available for postwar projects they are now planning. **M. R. Bailey**

AMERICAN RADIATOR & STANDARD SANITARY CO.

See Heating

BRIDGEPORT BRASS CO.

Our studies indicate that architects and specification writers will be on the soundest ground to specify copper and brass products for construction projects as they did before the war. **W. Steinkraus, President**

BRIGGS MFG. CO.

We regret that we are unable to furnish detailed information now. . . . **R. B. Jenkins**

A. M. BYERS CO.

There is no question of availability of wrought iron pipe and other wrought iron products in sufficient volume to meet all requirements for postwar projects. **L. F. Rains, President**

W. A. CASE & SON MFG. CO.

Insofar as this company is concerned, the plumbing fixtures that will be available when building restrictions are lifted will be substantially the same as those produced prior to the war. **W. G. Case, 2nd, Vice President**

CARDOX CORP.

Cardox fire fighting equipment will be available during the immediate postwar period. Changes in equipment will be natural rather than radical. . . . **R. W. Neville**

CRANE CO.

There will be no change in roughing-in dimensions and equipment will be generally the same as the prewar line. **Russell G. Creviston**

ELJER CO.

When restrictions are lifted, Eljer plans to resume the manufacture of all items shown in their regular catalogs as well as certain patterns which have been added during the war period. . . . **A. E. Thiesfelat**

FIAT METAL MFG. CO.

In the postwar period the design of the shower cabinets that we manufacture will be essentially the same as shown in our 1941 catalog, with the possible exception that the shower cabinets will be modernized. **Stanley E. Nilson, President**

GENERAL FITTINGS CO.

Water heaters, mixing valves, and general converters will be available after the war. We have no statement to make regarding new products. **H. F. Horton, Vice President**

GRINNELL CO.

Architects now planning postwar projects can definitely specify now, with assurance of future availability, prewar products or new products offered during the war. **F. L. Jackson**

IMPERIAL BRASS MFG. CO.

We do not anticipate much change in postwar products over our prewar line. There will be many improvements in design and functional characteristics, but we will retain the general character of the prewar lines. . . . **F. C. Shafer, Vice President**

JOSAM MFG. CO.

There have been improvements in grease and oil interceptors. Our prewar line is intact, while a number of improvements and additions have been added, and architects can specify material with assurance of future availability. **M. J. Hirshstein, Executive Vice President**

KOHLER CO.

Items most used immediately before the war will be available whenever manufacturing can be resumed, with some changes and refinements. Information on new models cannot be disclosed at this time. **Herbert V. Kohler, President**

MIAMI CABINET DIVISION—THE PHILIP CAREY MFG. CO.

Ninety days from VE-Day we will be in a position to furnish our complete line of prewar cabinets as carried in 1942 Sweet's catalog. We have new cabinets in the development stage. . . . **Martin V. Caffey**

MUELLER BRASS CO.

We intend to continue production and sale of copper tube and solder fittings for the plumbing and heating industries. There will be a supplementary new line about which information cannot be released as yet.

CHARLES PARKER CO., THE

Many items of our prewar plumbing accessory line will be available, plus several other new items now in the plan stage. **J. J. Connors**

PERMUTIT CO.

Water softener equipment will be available for civilian use without delay. Household equipment will be available in full prewar line shortly after the end of the European war. . . . **H. W. Foulds**

REVERE COPPER AND BRASS INC.

There is nothing to prevent architects from specifying Revere products in their postwar projects. SPS Brass Pipe and "K," "L," and "M" water tubes will again be offered, and bronze and aluminum extruded shapes will also be available. **C. A. Macfie, Vice President**

SANYMETAL PRODUCTS CO., INC., THE

Partitions and doors for toilet compartments are available now in limited colors and finishes. Complete lines will be available after the war. **C. J. Daugherty, President**

SCOTT PAPER CO.

New, modernized, more efficient, streamlined dispensing equipment, towel cabinets, and tissue fixtures will be available shortly after the war's end. . . . **G. H. Swatek**

SPEAKMAN CO.

Complete information is now available. Catalog "S" now gives complete facts and specifications on postwar products. **W. A. Speakman, Jr., President**

WADE MFG. CO.

We will continue to offer after the war a complete line of drains, grease interceptors and water hammer arresters. **N. B. Graham**

H. W. TAYLOR CO.

Architects will be able to specify and purchase complete line of equipment as shown in Sweet's, plus some new items.

WALWORTH CO., INC.

As soon as copper or brass pipe can be secured for postwar building projects, we will be in a position to supply valves, fittings and flanges to the building field. **Alfred J. Eichler, Vice-President**

HENRY WEIS MFG. CO.

There may be some slight changes in models and sizes but no change radical enough to affect the use of the data now available in Sweet's. **Paul W. Kerr, President**

YOUNGSTOWN SHEET AND TUBE CO., THE

See Structural

J. A. ZURN MFG. CO.

All products will be immediately available and can be specified with assurance of their current or future availability. Our experimental and research department is fully engaged in the development of many new products. . . . **Melvin A. Zurn, President**

PRODUCTS FOR POSTWAR PLANS

KITCHEN EQUIPMENT

BETTER internal construction will be featured by most manufacturers as the chief trend in kitchen equipment during the immediate postwar period. While there will be some new designs available in cabinet equipment, for the most part they will match in size, and will supplement, existing cabinets. Architects will be safe in specifying equipment available before the war, with assurance that space allocations will be adequate to take care of any interior construction changes.

AMERICAN CENTRAL MFG. CORP.

Extensive research has been done by this company in an attempt to improve kitchen work centers. Our new equipment will be sold as packaged merchandise.

William F. Valentin

EDISON GENERAL ELECTRIC APPLIANCE CO.

We will offer limited lines of prewar models of ranges, refrigerators, water heaters, dish washers, freezers, kitchen cabinets, sinks and home-laundry equipment in conformity to WPB releases.

W. R. Schafer

KITCHEN MAID CORP., THE

Kitchen Maid cabinets may safely be specified by architects. Some of the materials will undoubtedly be improved, but the general design will be carried on.

A. F. Wasmuth, President

LYON METAL PRODUCTS, INC.

Postwar kitchen cabinets can be specified by architects, also steel lockers, shelving and shop equipment. Future availability assured. . . . L. B. Rhodes

MULLINS MFG. CORP.

Postwar equipment will harmonize with prewar lines but tops and many hidden features will be improved. . . . A. D. Lemonte

NORGE DIVISION—BORG-WARNER CORP.

The types and models of postwar products that we manufacture will be determined by government edict and not by ourselves. . . . Howard E. Blood, President

J. C. PITMAN & SONS

Pitco Frialators are available. Postwar products are in the blueprint stage and information cannot be released at present.

SERVEL, INC.

See Air Conditioning

ELECTRICAL AND LIGHTING EQUIPMENT

CHIEF consideration in planning for electrical equipment in postwar buildings is the adequacy and flexibility of the wiring system. With the increase of the number and kind of electrical devices for all domestic and commercial purposes, from washers and refrigerators to accounting machines, it is important to provide wiring and outlets in anticipation. Also, conduit or raceway provisions for additional communication wiring—telephone, teletype, signal and address, radio and television, alarm, time, etc. Electronic devices will be used largely for automatic controls, signals, alarms and safety equipment. Lighting fixtures have been developed rapidly, indicating more extensive use of fluorescent and "cold cathode" lighting as well as higher standards of illumination. Closer integration of ceiling structure and lighting sources are indicated. Present manufacturers' information is sufficient for advancing architectural and engineering use in designing and specifying postwar electrical and lighting equipment.

FRANK ADAM ELECTRIC CO.

All products including switches, circuit breakers and panel boards of improved and up-to-date design will be available for postwar construction.

ANACONDA WIRE & CABLE CO.

While we have been forced to substitute synthetic rubber for natural rubber in our regular line of building wires, they seem to be functioning satisfactorily. We also have wire insulated with a plastic.

W. S. Sprackling, Vice President

ARROW-HART & HEGEMAN ELECTRIC CO.

All specification-grade products will again be available in the postwar period. Most products are now available as shown in Sweet's catalog. . . . R. N. Pack

BENJAMIN ELECTRIC MFG. CO.

This company is re-instating all of the products shown in our catalog No. 26. Many of the former items are being improved and a number of new commercial and industrial fluorescent lighting units will be available in the spring of 1945.

R. W. Staud

BRYANT ELECTRIC CO., THE

It is our opinion that the architect may, with assurance of their availability, use the present listings. We have in mind the production of new devices and the redesign of others, yet we do not foresee any revolutionary changes in the materials which we process or product design. . . . Harold Hey

S. H. COUCH CO., INC.

We can state that our line of prewar telephone and signaling apparatus may be specified by architects. . . . J. E. Atkinson

CURTIS LIGHTING, INC.

Curtis Lighting is planning to make all of its prewar products plus new postwar items. In the meantime, prewar items can be specified as our line will not be revolutionized, but brought up to date.

G. T. Morrow, Vice President

DAY-BRITE LIGHTING, INC.

Architects may specify all Day-Brite's currently listed. Products for postwar will be announced by January 1.

D. J. Biller, President

EDWARDS AND CO., INC.

Postwar signaling and communication line has been designed to accommodate prewar specifications and wiring. There will be many changes in design, but the basic function will stand pat. . . . C. W. Bostrom

ELECTRIC STORAGE BATTERY CO., THE

Cannot furnish information now on prewar or postwar products with assurance of future availability. . . . W. D. Jones

FARADAY ELECTRIC CORP.

Hospital and Fire Alarm products may be specified from current catalogs.

H. W. Schild

GENERAL ELECTRIC CO.

Initial production must be restricted to one or two models in each line, and speaking generally we will resume production on our most popular and fastest selling prewar models. Expansion of lines can only come in direct proportion to the increase of flow of materials, labor, and accelerated fabrication. . . . A. L. Scaife

GENERAL LUMINESCENT CORP.

Colovolt cold cathode 93 in. lamps are available now. Industrial and commercial fixtures will be available after January 1.

W. G. Anderson

DELCO GENERAL APPLIANCE DIVISION—GENERAL MOTORS CO.

See Heating and Air Conditioning

EDWIN F. GUTH CO.

We have already reconverted to prewar quality and to many postwar designs. Fluorescent lighting fixtures in our new catalog No. 44 can be specified today, and will be supplied now and after the war.

Fred E. Guth

HAZARD INSULATED WIRE WORKS DIVISION—THE OKONITE CO.

There are no radical changes in type or design—the only important change is the substitution of Buna S Synthetic rubber for natural crude rubber, and this has been accomplished with satisfaction and with the approval of all interested standards authorities. . . . Carl P. Brodhun

A. WARD HENDRICKSON & CO., INC.

All of our products are made to special order. Any material specified by us will be available in postwar period, and many will be available immediately.

Arthur W. Hendrickson, President

HOLOPHANE CO., INC.

The Holophane equipment listed in our prewar catalog will be available for postwar lighting. We expect to have a new line of lighting equipment specially designed for fluorescent lamps. . . . Henry L. Logan

HOLTZER & CABOT

Architects can safely specify any of our prewar products with assurance that they will be available postwar. There will be improvements, but these, in all probability would mean merely slight revisions of specifications at a later date. . . . George J. Rick

HUB ELECTRIC CORP.

We do not anticipate any radical changes in the design or application of our products.

I. M. Fixman

I-T-E CIRCUIT BREAKER CO.

We are unable to announce any new products for postwar projects. However, we will be in a position to furnish the same

products we did before the war.
R. E. Murphy

KLIEGL BROS.

Materials to be manufactured will incorporate all improvements thought of and perfected, which means, in a sense, that our postwar products are immediately under way. . . . H. A. Kliegl, Vice President

LINCOLN ELECTRIC CO.

Architects can of course specify welding for postwar structures with assurance that both equipment and skilled manpower will be available when war needs are relaxed.
J. R. Morrill

NASH-KELVINATOR CORP.

We cannot make any editorial publication statement regarding our prewar and new products which architects could specify now with assurance of future availability.
C. J. Coward

NATIONAL ELECTRICAL MFGRS. ASS'N.

All prewar electrical building materials will be generally available. . . . W. J. Donald

PENN ELECTRIC SWITCH CO.

Our prewar controls for automatic heating are available at the present time. Our postwar controls will naturally embody some improvements and possibly some new designs. . . . J. R. Netedu

RIC-WIL CO., THE

Products are available now and for immediate postwar construction.
Walter L. Bartel

SCHULMERICH ELECTRONICS, INC.

We have ready for production, a complete line of electronic equipment for various church needs which can be placed in production just as soon as permission is given by the WPB.
G. J. Schulmerich, President

SQUARE D CO.

There will be a number of modifications and improvements in standard products. These, of course, will be gradual and will not be much different than our products are at present. . . . C. Lewis Hull

TRUMBULL ELECTRIC MFG. CO.

Present line available and suitable for immediate postwar projects, new lines not ready for publication. . . . R. C. Graves

WARREN TELECHRON CO.

Although we are working on postwar plans, they have not reached the stage where we can release any information concerning them. . . . E. J. Holland

WESTINGHOUSE ELECTRIC & MFG. CO.

We plan to produce again all of the lamps for which there is a reasonable application and demand. Long thin fluorescent tubes ranging up to 8 ft. in length will offer unusual opportunities and will supplement our present line of fluorescent lamps. . . . D. W. Atwater

PRODUCTS FOR POSTWAR PLANS

OTHER BUILDING PRODUCTS

TYPICAL of so many of the items to be manufactured after the war, changes in these products will be mostly improvements, rather than radical changes. Whether it be movie projectors or elevators, manufacturers advise that the postwar lines will closely parallel prewar equipment. Some manufacturers are planning to expand their facilities to manufacture products heretofore foreign to them. Architects will be safe in specifying prewar products with reasonable assurance of their immediate availability at the end of the war. There will be changes, but for the most part, these changes may be accommodated by the architect without seriously disrupting existing plans.

AMERICAN STEEL & WIRE CO.

There is no conversion problem for this company and as government requirements for the military are lessened, more stocks will be available. . . . C. F. Hood, President

AMPRO CORP.

Our company is now part of the General Precision Equipment Corp. For the postwar we will manufacture 8mm. and 16mm. cameras and undoubtedly will revise and improve our line. There is also the possibility of television equipment
Harry Monson

ANCHOR POST FENCE CO.

Fences will be the same as those sold prewar. . . . M. J. Donahue

ART METAL CONSTRUCTION CO.

Postwar lines will be the same as prewar with added specialties for electronic units, sub-assemblies for aircraft and units for other new developments.
R. W. Clark, Vice President

G. S. BLODGETT CO., INC., THE

Baking and roasting oven equipment is now available in prewar or superior quality. No changes are contemplated for the present or for some time. . . . W. L. Thomson

BURT MFG. CO., THE

All our prewar products will be available for postwar use. We have announced no new products. . . . Simmons

DAPRATO STUDIOS

For the most part our productions are especially designed. However, we have a limited number of stock items including statuary and tabernacles. Our designs are and will be available. . . . Paul A. Rigal

GENERAL FIREPROOFING CO., THE

When our facilities are released from war work we shall again manufacture furniture and interior equipment in substantially the same line as before the war.
George C. Brainard, President

HASLETT CHUTE AND CONVEYOR CO.

We have no new products to be made public at this time. Our products are all listed in Sweet's catalog with complete specifications. . . . F. W. Wagner, President

HOSPITAL SUPPLY CO. AND WATTERS LABORATORIES

Our general line of hospital equipment of prewar design will be available for postwar projects. Improvements developed during the war periods will be embodied in the design and construction of such equipment. . . . J. Kronish

LABORATORY FURNITURE CO.

Our production of technical laboratory equipment will continue postwar with only such change as represents improvements which our own production research brings about. . . . Paul Rittenhouse

FRED MEDART MFG. CO.

In the postwar period we will again manufacture our regular lines of gymnasium equipment. We are making improvements in all items. Complete information is available in Sweet's. . . . W. A. Robinson

OTIS ELEVATOR CO.

Architects and engineers may continue to specify the same types of elevator equipment as they have been doing in the prewar period with the assurance that they will receive the same service. . . . J. C. Bebb

PRYNE & CO., INC.

Postwar ventilators will be similar in size and design to prewar, but greatly increased in efficiency.

RITTER CO., INC.

All our equipment was new before the war and there will be no immediate changes in them after the war. . . . E. Hurlburt

ROTARY LIFT CO.

Our prewar line of elevators and material handling equipment are now available in improved designs. . . . E. E. Belevins

JOHN A. ROEBLING'S SONS CO.

Our postwar equipment will include same general line as furnished during the prewar period. . . . E. C. Low

STANDARD ELECTRIC TIME CO., THE

We can assure architects and engineers of the immediate availability of all the items in our most recent catalogs.
Herbert P. Blake, Vice President

STEWART IRON WORKS CO., THE

We will resume our manufacture of various types of ornamental iron, fence, and wire work as soon as restrictions are lifted.
S. M. Stewart

UNITED STATES RUBBER CO.

Architects should specify wires and cables now manufactured. New products will be made available and announced as soon as materials are released. H. H. Weber

VICTOR ELECTRIC CO.

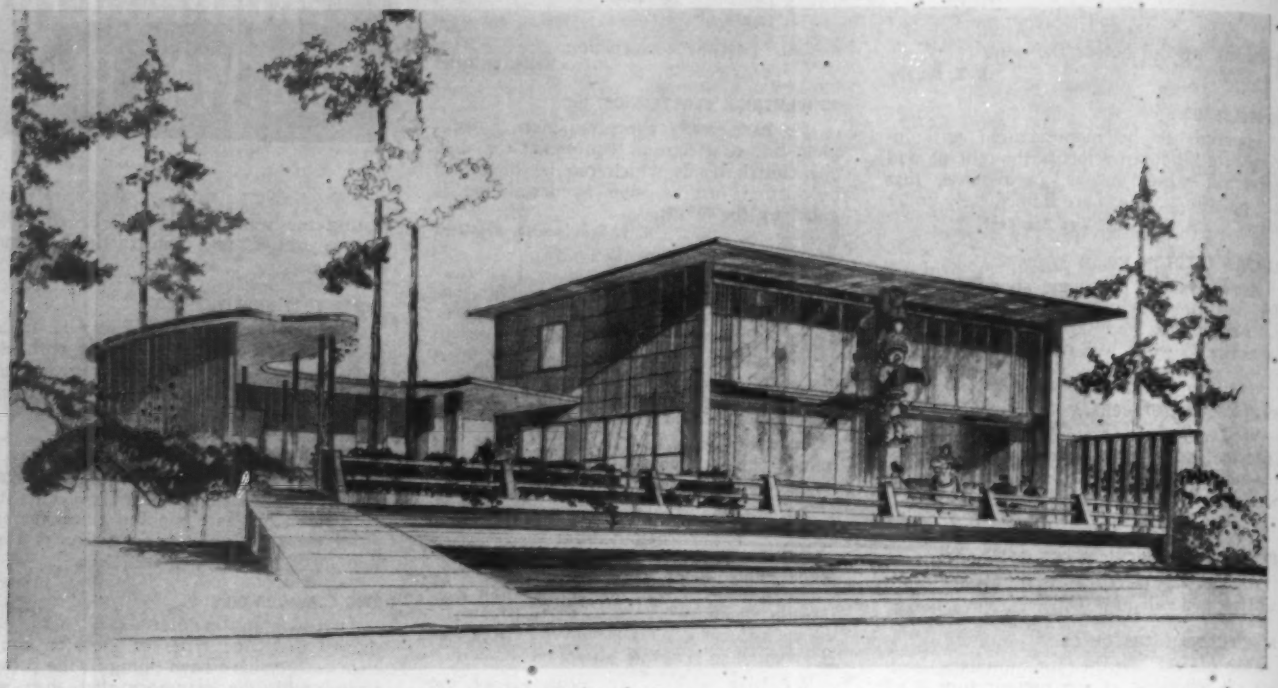
Ventilator fans will be substantially the same as prewar models, with improvements. They may be specified with assurance that space requirements will be the same.

WICKWIRE SPENCER STEEL CO.

We expect to again market the major items previously manufactured and sold for the building and construction industry. In addition we have under consideration many new products which it is now somewhat premature to announce. Charles B. Konselman

WILSON & HAIGHT, INC.

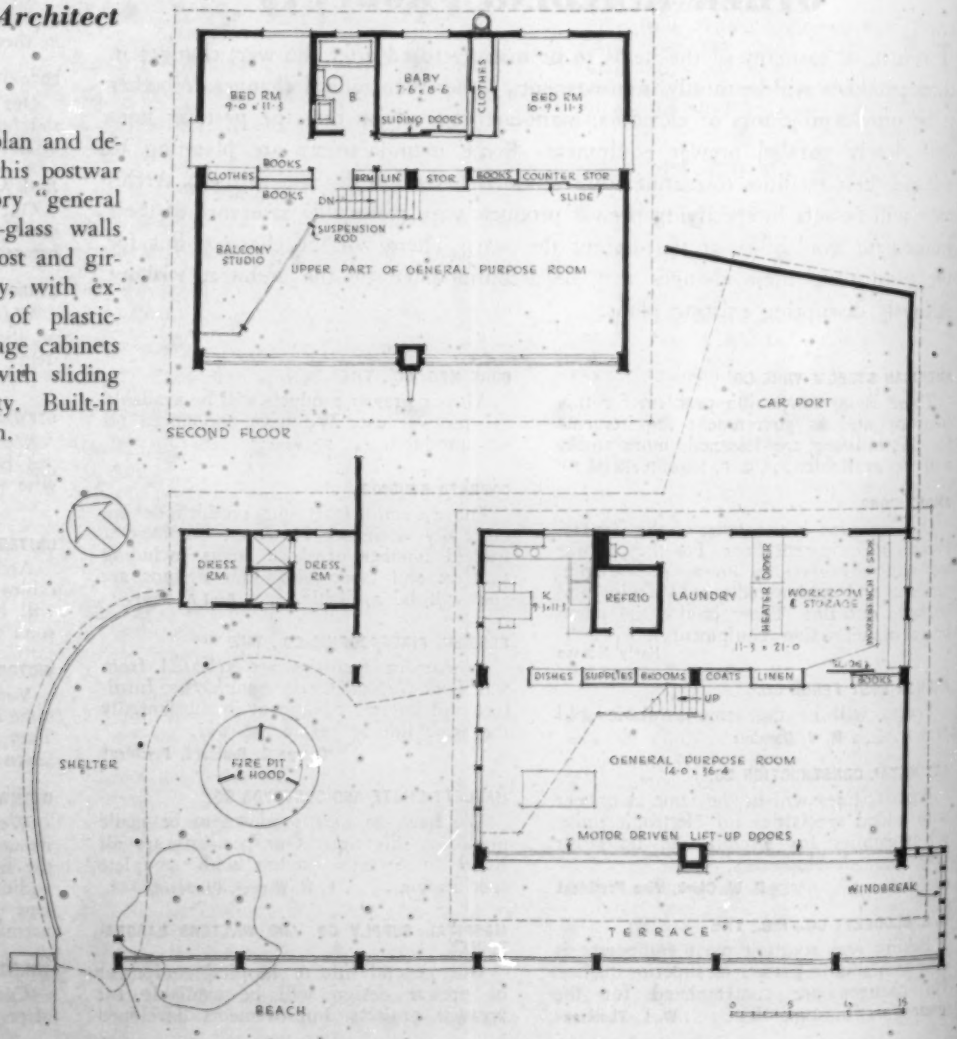
Complete call systems will be available after the war. . . . Jesse J. Haight



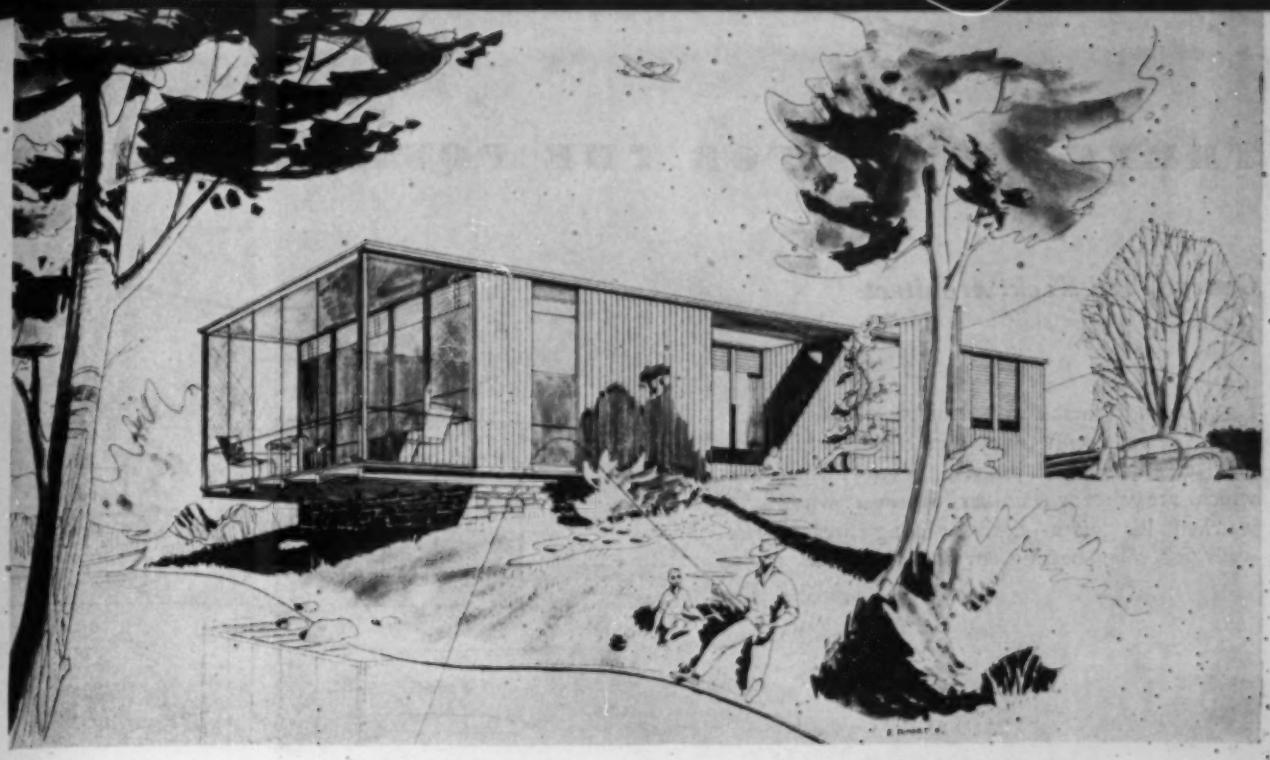
HOUSE OF IDEAS FOR SEASIDE LIVING

Paul Thiry, Architect

WITH full freedom both in plan and design, the architect has filled this postwar project with ideas: A two-story "general purpose" room, with double-glass walls opening like hangar doors. Post and girder construction for flexibility, with exterior and interior surfaces of plastic-coated plywood in color. Storage cabinets and counters for partitions, with sliding doors for access and visibility. Built-in refrigerator and freezing room.



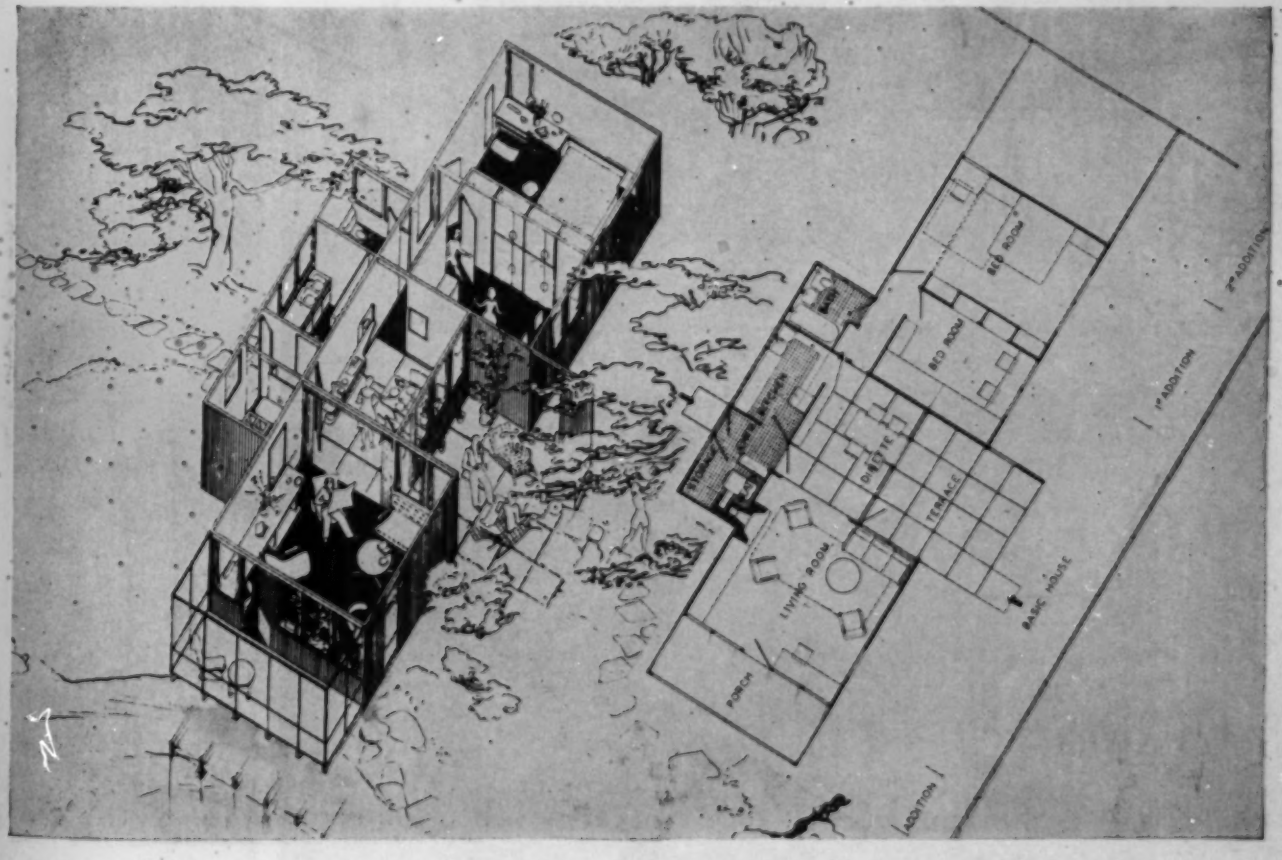
Outdoor living provisions are extensive: a sea wall protects the level terrace from whimsies of the tide; the shelter and dressing rooms provide privacy as well as protection from sun and winds, and, with the hooded fire pit, extend the hours for barbecues



EXPANSIBLE PREFAB HOUSE FOR POSTWAR

Walter Gropius, Architect

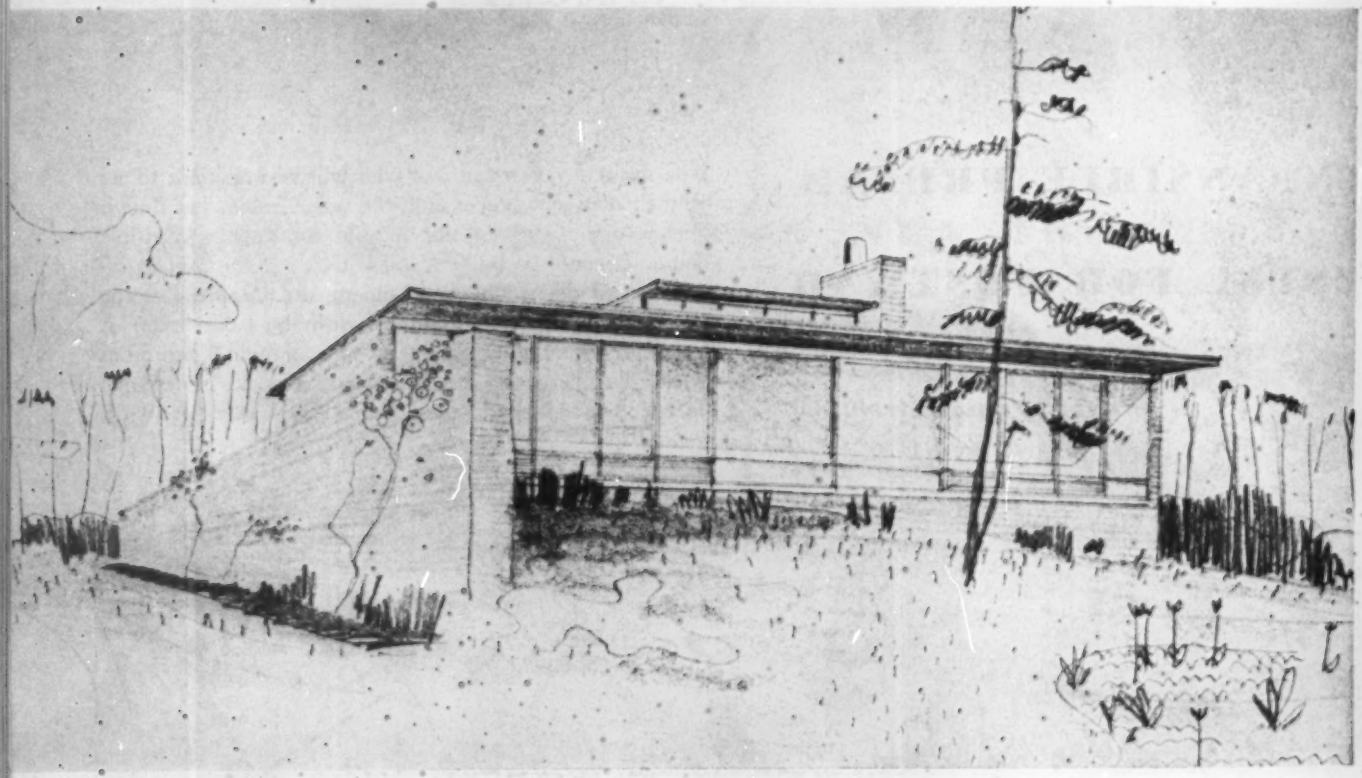
For the many new families who will be impatient to set up their own new homes after the war, Gropius has drawn this as one suggestion for a minimum-cube, expansible house. It could be built in quick time via the prefabrication system devised by Wachsmann and Gropius for the General Panel Corp., beginning with the basic house of one bedroom, and adding one or two additional bedrooms according to growing family requirements. It is designed on the four-foot module, with main portion 20 ft. wide.

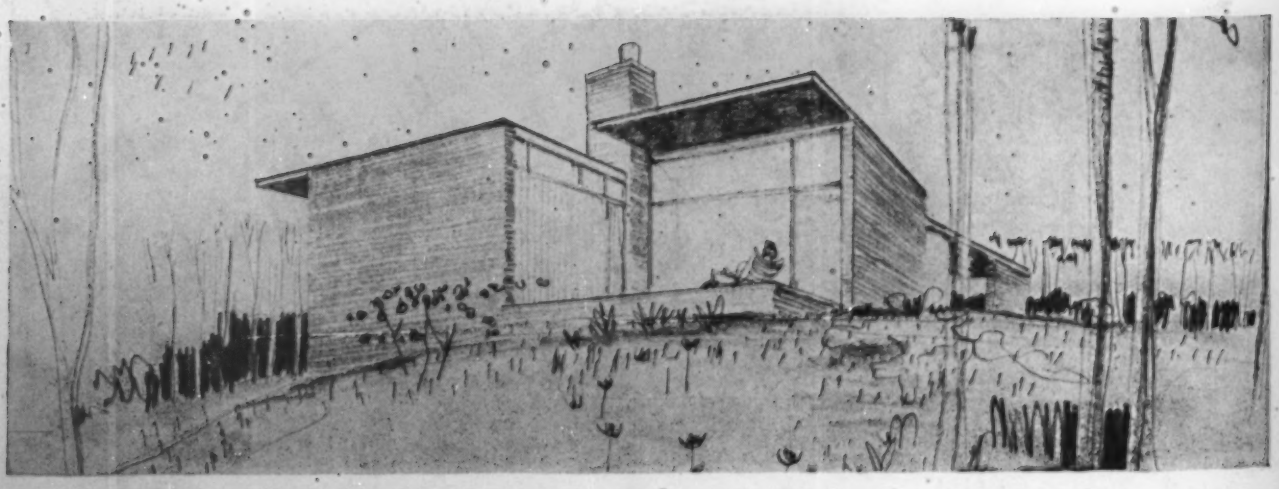


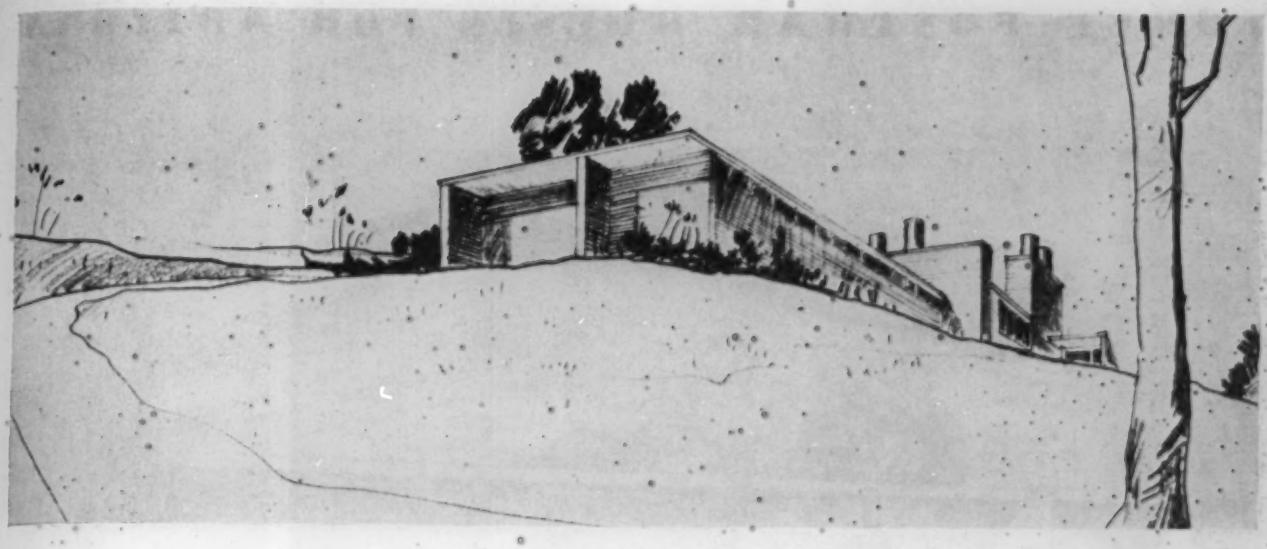
THREE HOUSES FOR THE POSTWAR WORLD

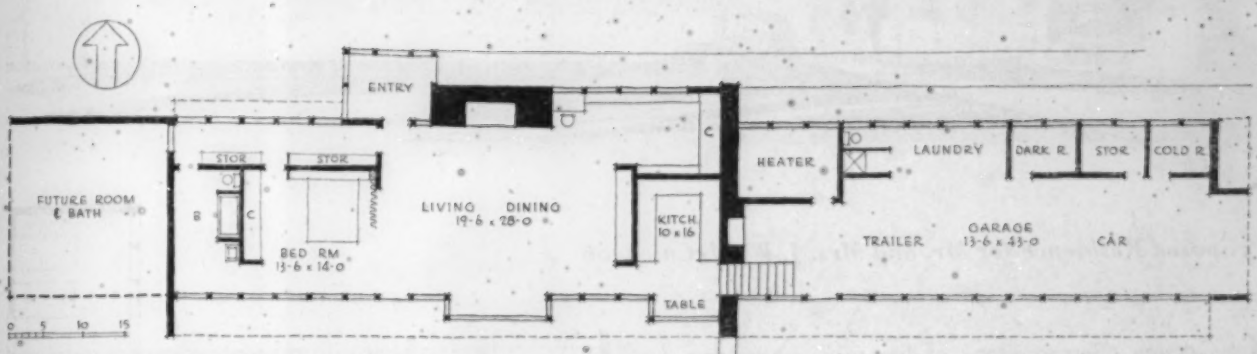
George Fred Keck, Architect

IN PREPARING these three plans for postwar, Keck has given his clients many of the ideas which are now glamorized as postwar developments, but which are already familiar to those who have watched his work—flexible living areas, glass walls for solar heating, overhanging shed roofs,

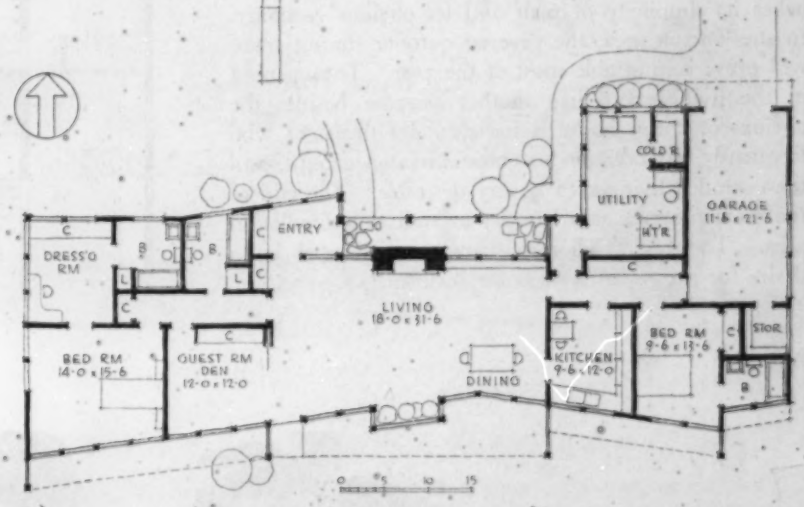


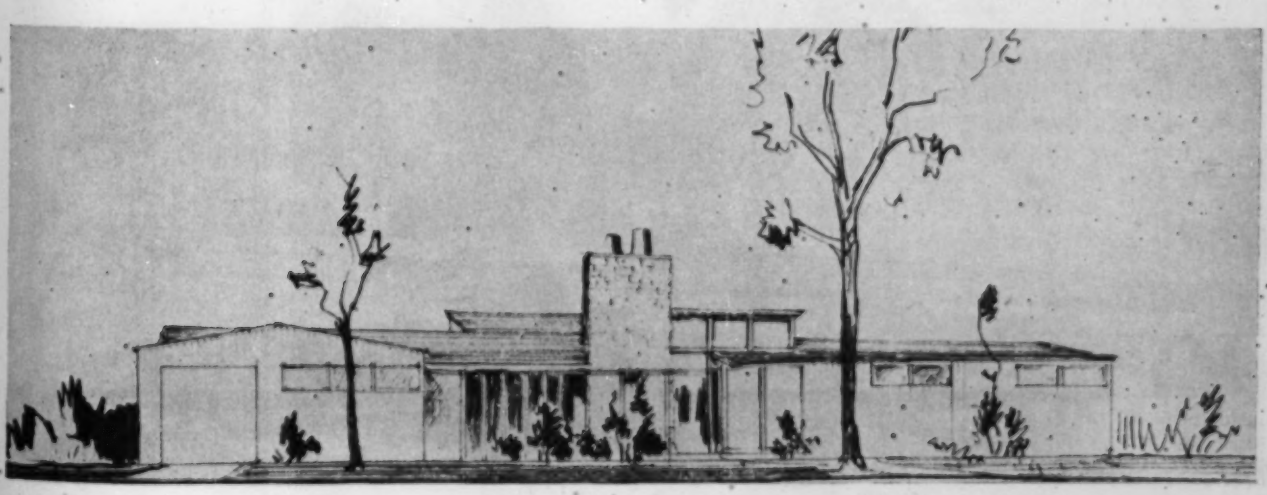




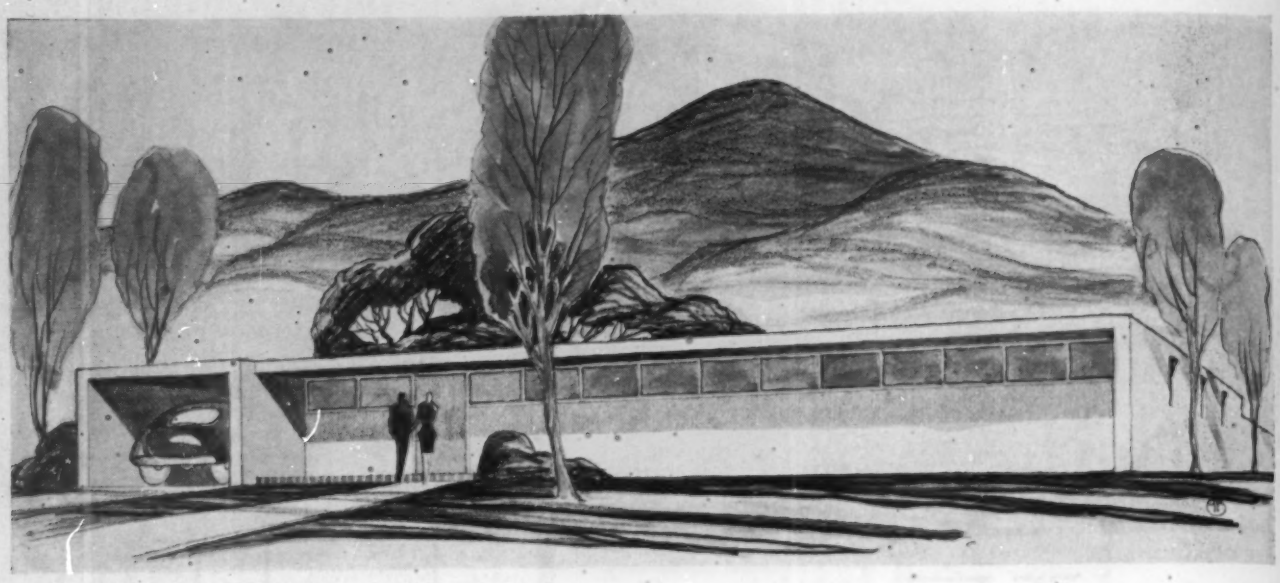


clerestory roofs, and so on. He has also added a couple of ideas not so familiar. For one, the flexibility of the living area has been extended to include one bedroom in that area in each of these designs, the partitioning done with disappearing curtains. Two of the plans show provision for future expansion. And they all have the "cold room" which is hailed as a postwar necessity. The storage areas are also noteworthy, for the possessions that modern technology is to give us.

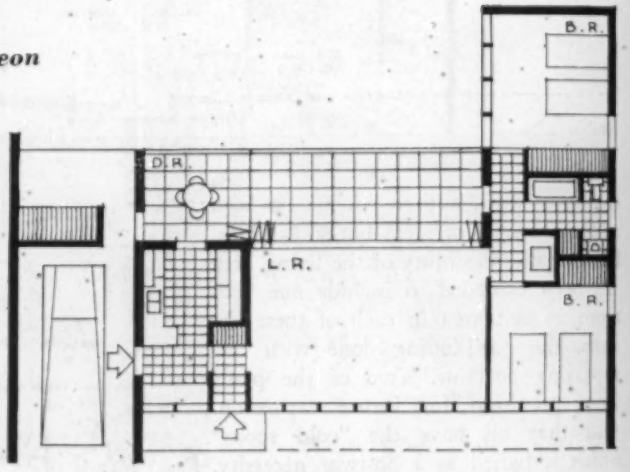




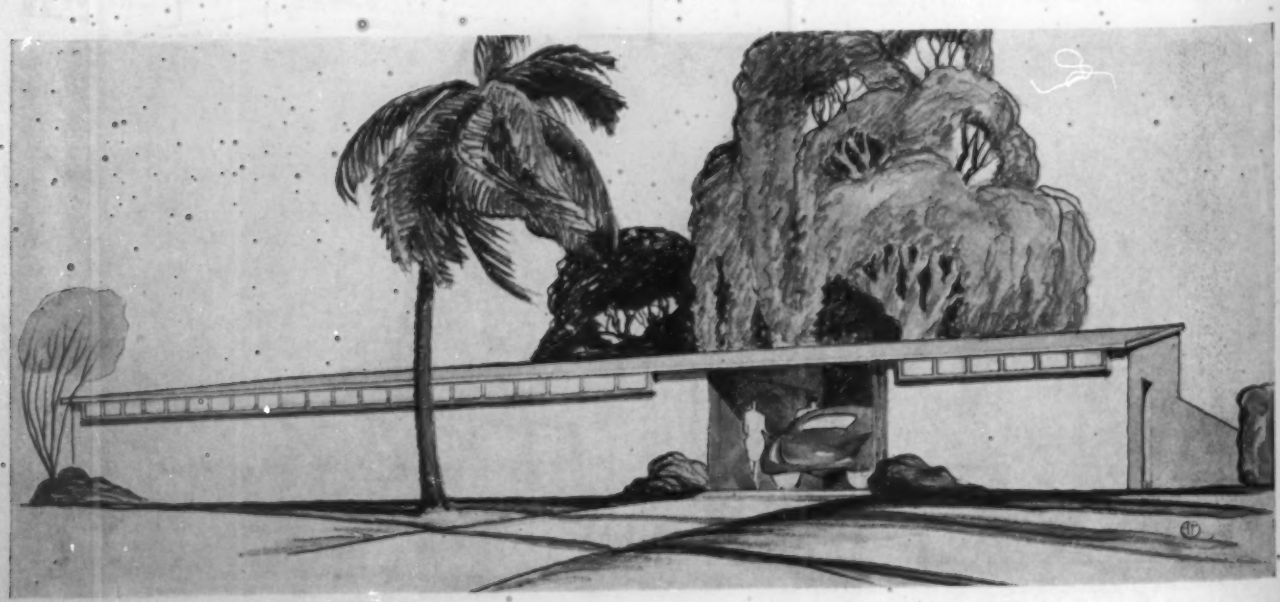
THREE POSTWAR HOUSES FOR ARIZONA



Proposed Residence for Mr. and Mrs. J. W. McCutcheon



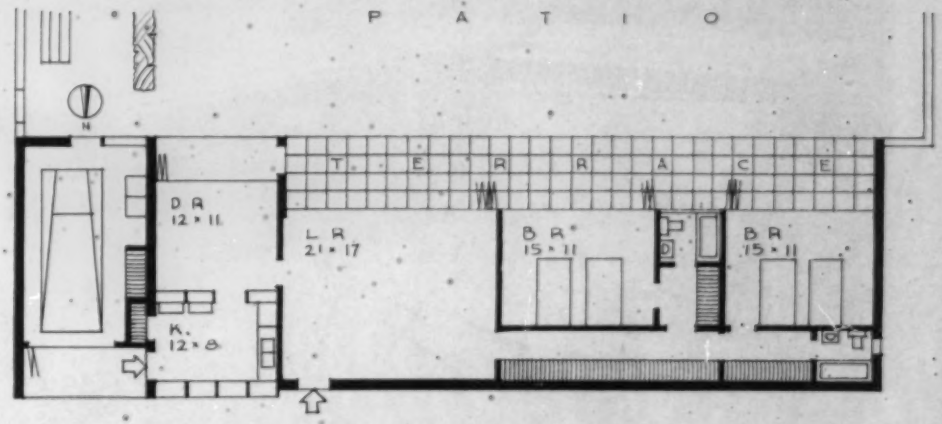
THIS design offers comforts of life to a degree that belies its simplicity of plan and its obvious economy. In the Tucson area, the covered outdoor dining space will prove comfortable most of the year. The opening of the living room has another purpose besides the obvious one: this house is for a college professor who frequently has occasion to entertain large groups; and the extended living area is very desirable. The end of the kitchen serves as a laundry as well as a circulation area. The high ribbon window was dictated by a desire for privacy as well as for furniture space within.

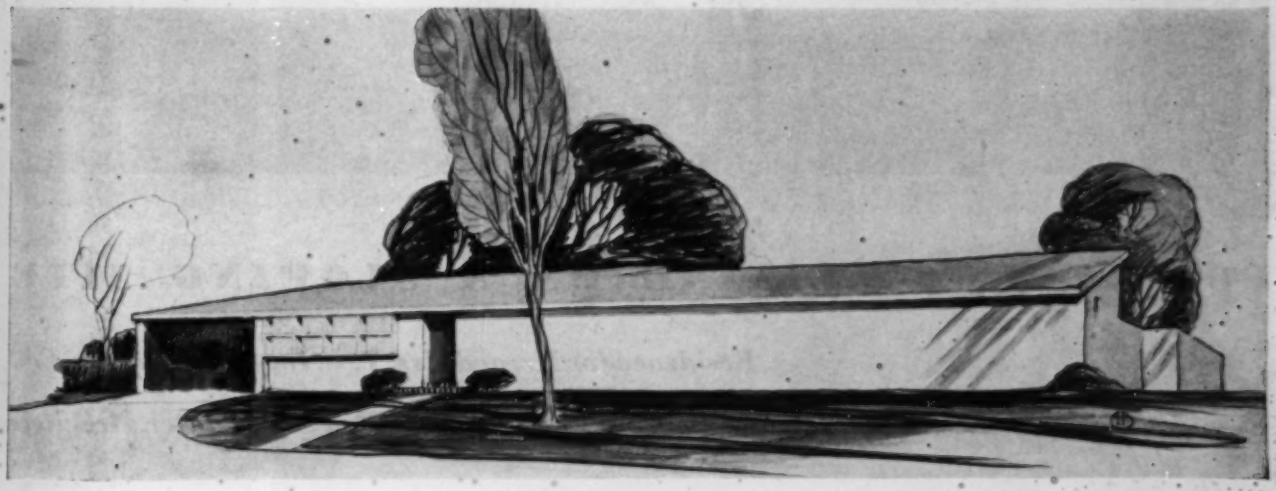


Three House Designs By Arthur T. Brown, Architect

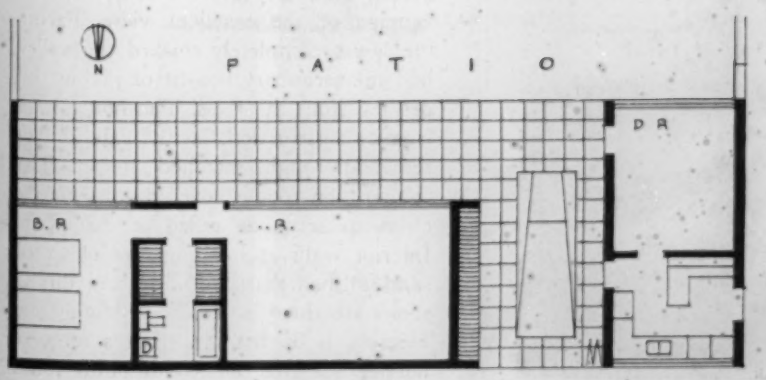
Proposed Residence for Mr. and Mrs. C. J. Hall

WANTING a house as up-to-date as the electrical equipment he sells, this client asked for a solar design, with a strip of fluorescent tubes running along the top of the south windows, to make the artificial lighting come from the same direction as the natural light. He wanted to waste no money for excess cube, so the north wall was planned for an interior ceiling height of 7 ft., sloping up to 9 ft. at the north wall. The overhanging roof slopes on upward to keep out the summer sun. A high wall gives complete privacy to the patio.



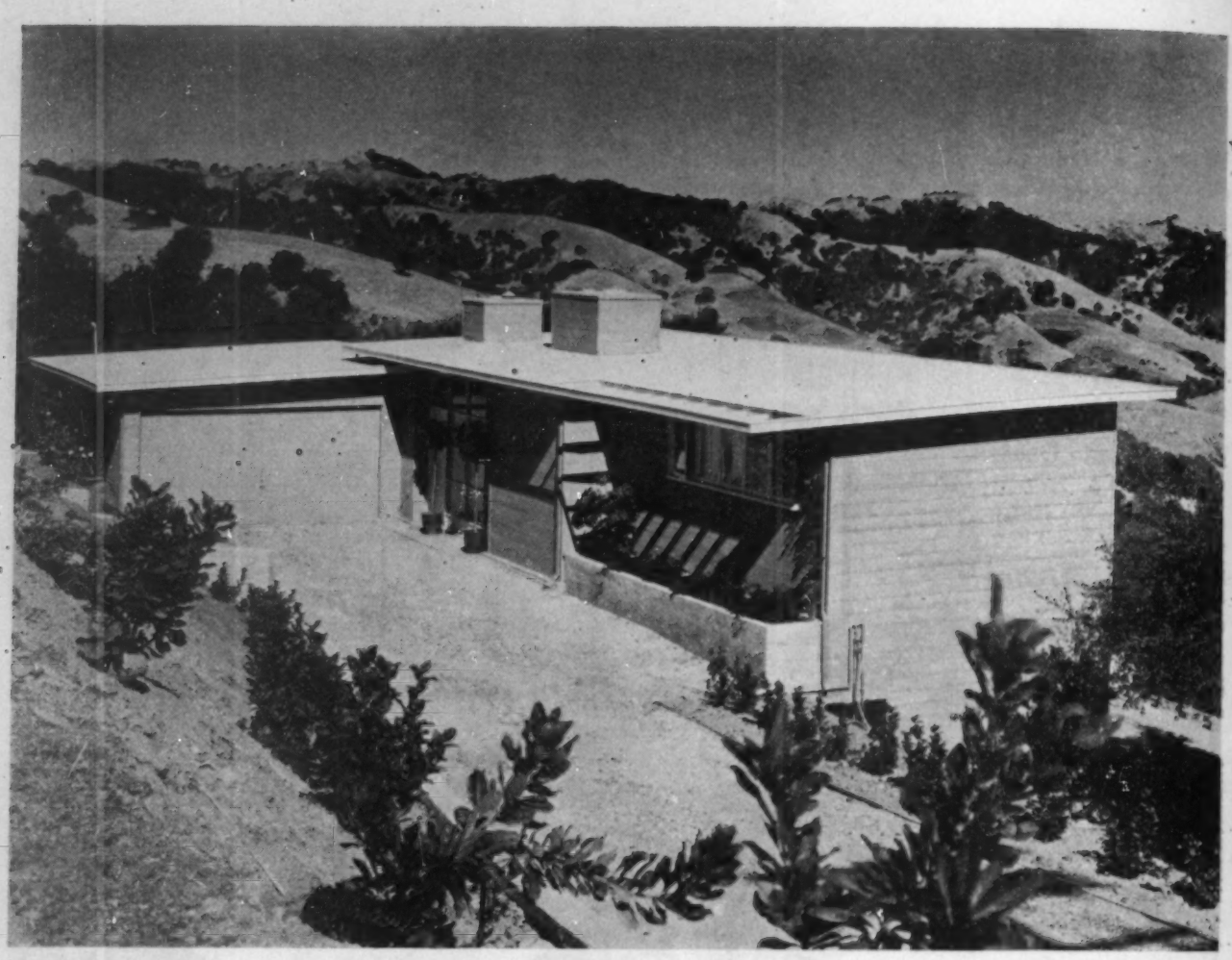


Proposed Residence for Mr. and Mrs. Malcolm G. Munn



THIS house, for a young couple, was designed as a modern interpretation of an Old Mexico hacienda. It has all the privacy and security of the Mexican inner-court plan. Here the zaguan has become a car shelter.

The small outside windows on the low wall of the house (rendering an opposite page) are placed between rafters at the ceiling line. This is the perfect location in this climate, reports the architect, for ventilation. The patio side is fully glazed to provide a full view of the garden in the patio. The glass walls also have the effect of permitting any necessary heating of the house by the winter sun, while the roof overhang shields the glass from the heat of the summer sun.



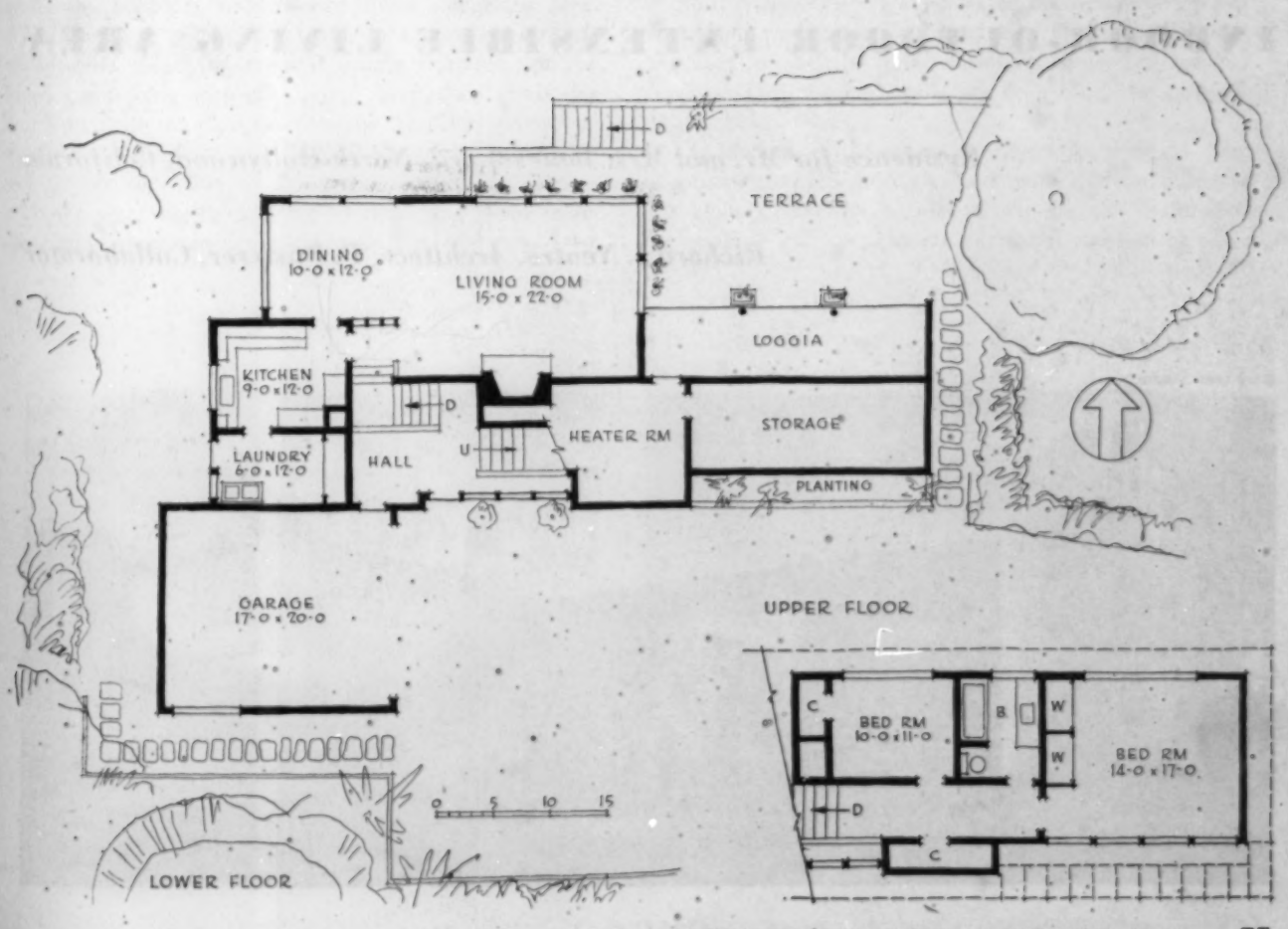
FOR OUTDOOR LIVING ON A SLOPING SITE

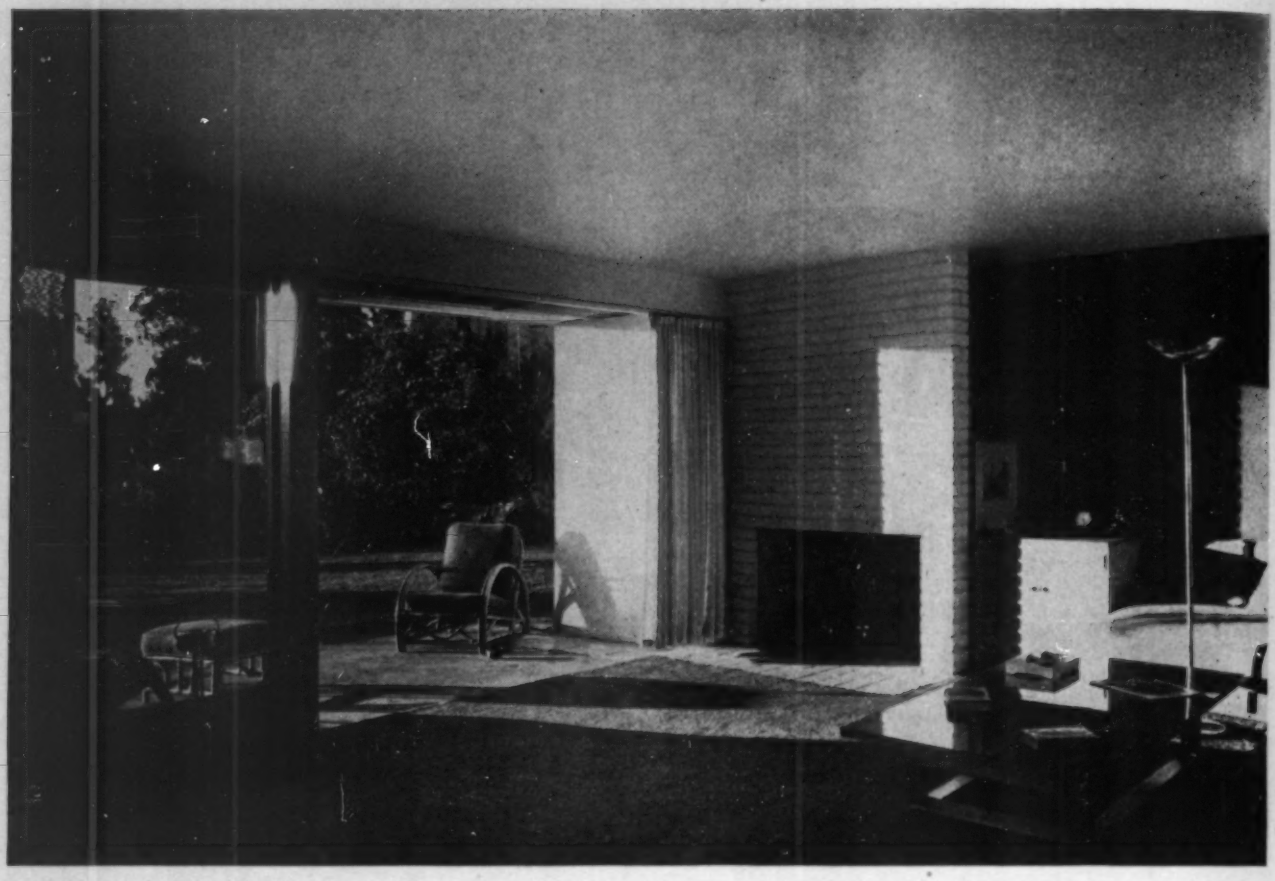
Residence for Mr. and Mrs. T. C. Ingersoll, Orinda, Cal.

Frederick L. R. Confer, Architect

Ned S. Rucker, Landscape Architect

THE PROBLEM here was to provide maximum outdoor living area on a steeply sloping site, for a family of two adults, and, of course, to take full advantage of the excellent view. Facing the house completely toward the valley had the secondary benefit of giving full privacy from the road. The house is of frame construction, with exterior of redwood rough matched siding. The composition roof is covered with marble chips to serve as reflective insulation. Interior walls and ceilings are of tinted sand-finished stucco. Living and dining room are done in a soft yellow green. Heating is by hot air, from a self-contained, gas-fired air conditioning unit.


TERRACE
DINING
10-0 x 12-0
LIVING ROOM
15-0 x 22-0
LOGGIA
KITCHEN
9-0 x 12-0
LAUNDRY
6-0 x 12-0
HALL
HEATER RM
STORAGE
PLANTING
GARAGE
17-0 x 20-0
LOWER FLOOR
0 5 10 15
UPPER FLOOR
BED RM
10-0 x 11-0
BED RM
14-0 x 17-0



INDOOR-OUTDOOR EXTENSIBLE LIVING AREA

Residence for Mr. and Mrs. James Ward, North Hollywood, California

Richard J. Neutra, Architect; P. Pfisterer, Collaborator

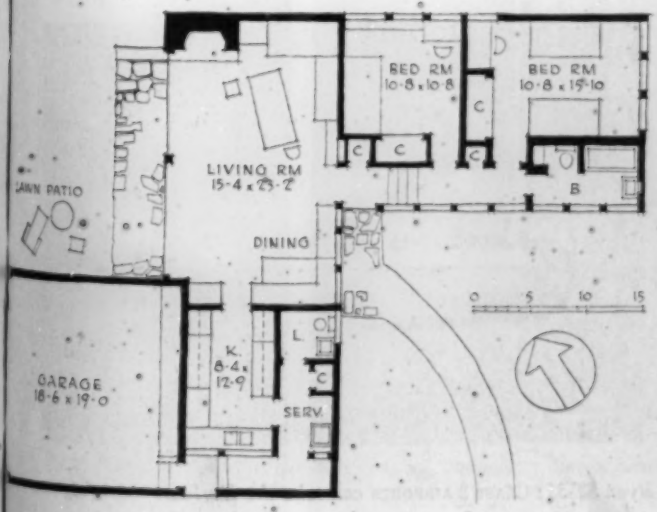
Luckhaus Studio

Julius Shulman photos

This little house not only opens for outdoor living; it unites the outdoors and indoors in an integrated area. When the huge sliding doors are open and the curtains pulled aside, the living room is simply extended, for the paved patio joins with the living room floor; even the hearth extends outward, so that the fireplace is enjoyed equally from inside or out. The cantilevered overhanging roof further ties patio to living room.

To the right of the fireplace in the living room is an upholstered sitting corner, with loose back cushions. Two tables of coffee table height, but built to be easily raised to normal dining level, were especially designed for this room, and are executed in light birch. The light birch was also used for shelving, radio enclosure, corner benches and couches. The two end walls are deep blue, the carpet a lighter blue.

The kitchen, in the center of the service wing, is done in white enameled flush plywood, with fold-down breakfast table. Under the broad end window the drainboard is burgundy red; the window has metal venetian blind.



AIRPLANES, AIRPORTS MAKE THE GREAT AIR AGE

". . . the investment in airports will closely match the value of the planes"

By the Editors of Aero Digest

Every community in the land—from the great metropolis to the smallest village and back-country crossroads—is today agog with plans to establish itself on the air map of the postwar world. Recognizing the urgent need for clarification of the many problems confronting them as a result of the current swift technological changes in aviation, AERO DIGEST and ARCHITECTURAL RECORD are pooling their editorial resources in undertaking a joint presentation of the major factors involved in the planning, design and construction of the many types of landing facility that will be required. The present article summarizes progress to date and indicates the chief problems. Later articles will treat the subject in greater detail.

AIRCRAFT and airports go hand in hand. This point was emphasized last month by P. T. Wright, Civil Aeronautics Administrator. "It must be remembered," he said, "that airports are related to . . . the development of the aircraft which are to use the airports."

The railroad industry grew on steel rails, the automobile industry on surfaced highways. Similarly the aviation industry depends for its existence upon adequate landing facilities.

Aircraft will range from thousands of giant transport planes, flying millions of miles daily with personnel and cargo from all parts of the globe, down to personal aircraft of every needed type—safe, easy to operate, serviceable—which will be available, after the shooting is over, at prices within reach of the public.

Research programs have brought about developments in aircraft design at three times the prewar rates. Improved wing designs have decreased drag and increased speed. Weight per horsepower of engines has been cut 40 per cent, and at the same time stamina and endurance have been increased. The airplane stands ready today to assume its destined place in the world's transport and travel.

The initial investment required for airports will closely match the investment indicated for aircraft. Thus, according to informed opinion, the airports which the Civil Aeronautics Administration estimates that the nation will need will approach in value the aircraft which will make use of these facilities within a few years after the war.

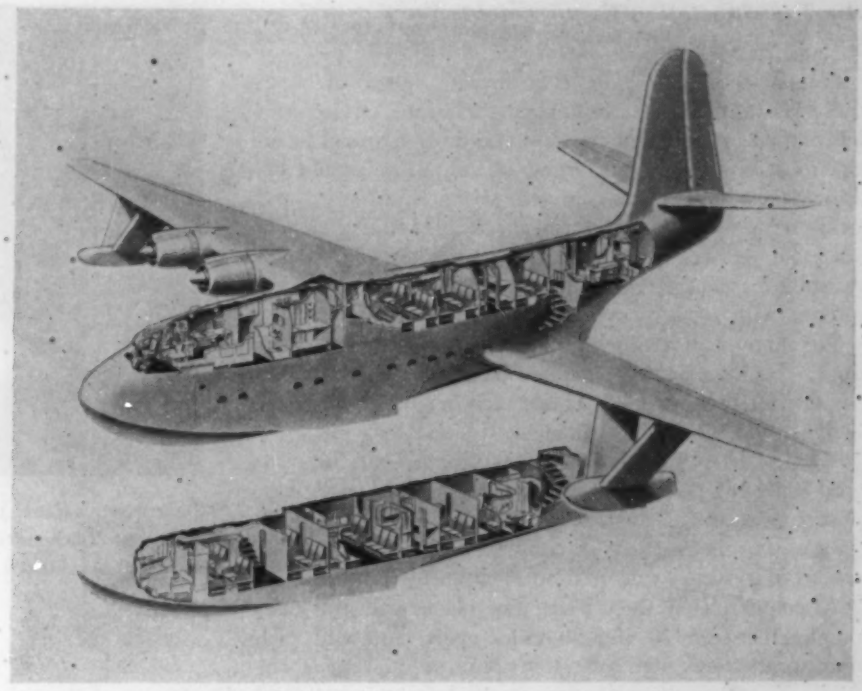
Possessing some 3,000 fields now, by CAA estimates the United States will require double that number within five years after the end of the war. The total number of aircraft that will be in service at that time has been placed by authorities at between 100,000 and 450,000. Anticipating that the bulk of the increase will be within the personal aircraft category, the CAA master plan calls for 3,004 additional Class 1 and Class 2 airports; added to the 1,791 now in existence, this will make a total of 4,795 of the smaller fields. There are now 1,151 fields in the larger-sized classes; the addition of 359 larger airports will yield a total of 1,510 port facilities suited to airline service. Al-

Rudy Arnold photo

CLASS 1 AIRPORTS *take planes up to the Culver LCA (left) or the Ryan ST-35;* CLASS 2 AIRPORTS *can take the Harlow PC-5A (right)*

SEA-PLANE BASES *will serve huge planes such as this Mariner, a proposed conversion of the famous Martin Mars. But intercontinental lines are now planning to operate from airports on land*

AIRPORT CLASSES, *as established by the Civil Aeronautics Administration, are based not on weight alone nor on power alone but on both factors combined. The "index number" of any plane is the product of its wing-load factor (take-off weight divided by wing area) and its power-load factor (take-off weight divided by total horsepower). See text*



though the smaller airports to be built outnumber the larger ones, about 61 per cent of the estimated cost of $1,250,000,000 under the CAA plan would be spent on the larger ports, for improvements and new construction.

Envisioning a wide immediate acceptance of air transport, some other plans have called for even greater airport expenditures. Thus the ambitious ten-billion-dollar project sponsored by the Smaller War Plants Corporation proposes the construction of nine "superhighways"—three east-west across the continent and six north-south, with a mile-square airport at each of the 18 intersections. A plan of such scope would naturally look to federal funds for a large part of its financing, and no doubt the plan is meant to assist in solving postwar unemployment problems.

CAA Airport Classes Based on Runway Lengths

The five classes of airports, as set up by the CAA, are based on the runway lengths required by different airplanes. Class 1 airports are those having landing strips up to about 2700 ft., and which will accommodate small personal aircraft with an index figure (wing-loading times power-loading) not exceeding 190. Class 2 airports accommodate the larger personal aircraft, and small transports. Runway lengths at these fields range from 2700 to 3700 ft., and 230 is the upper limit of the index figure for planes permitted to use them. The airports comprising Classes 3, 4 and 5 accommodate planes of still greater size, according to their index number—which measures efficiency in landing and takeoff.

Edward Warner, Civil Aeronautics Board Vice-Chairman, has suggested the possibility that aircraft manufacturers might modify their designs to fit the particular types of airport which their planes are to use. Airports near the business centers of communities, intended for the accommodation of commercial transports, wait on the design of planes which can use the short runways made necessary by high real estate costs and by the existence of obstructions. It is equally important that each community take into account the types of plane available.

Photo, courtesy Aero Digest

CLASS 3 AIRPORTS *and larger take the big transports, among which this Lockheed Constellation is currently still the heaviest*

Air Transportation Requirements Vary

Not all communities desiring airports, nor even all of those 500-odd which have applied for airline service, will be justified in providing runways and other terminal facilities to accommodate the largest planes. They should examine their local airport project with critical eyes, and study seriously the kind of traffic which will assure them adequate service. Towns off the main transcontinental routes, for example, would be poorly advised in planning airports with 7000-ft. runways.

For many communities, feeder line service will be adequate. Manufacturers already are planning to build planes suitable for this purpose. These, according to preliminary designs, will mostly be twin-engined aircraft having gross weights of from 15,000 lb. to 33,000 lb., and will be powered with engines which will permit them to use fields with runways of 2000 ft. to 4000 ft. in length. They will have a passenger capacity of from 14 to 30, and be capable of carrying cargo loads of from 8000 lb. to 12,000 lb.

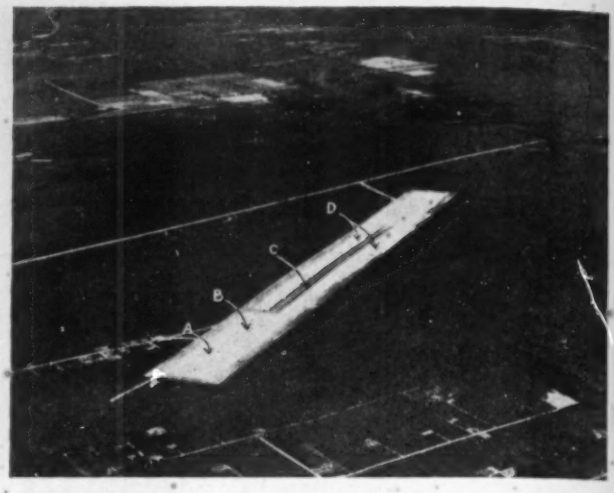
As contemplated, these feeder line planes will link cities ranging between 20 and 50 miles apart, and will each make connections with some transcontinental airline at one point or another along their routes. Where adequate commercial service can be rendered by feeder lines, and where most of the air activity will be in the use of personal aircraft, an "airpark," located adjacent to or within the limits of the town, and with runways up to 4000 ft in length, will provide sufficient facilities.

Besides the matter of layout scale, communities must take cognizance of two other major factors in establishing, or in expanding, a transportation airport. There is the question of choosing a suitable site, which in turn involves several considerations: the possibility of future expansion as local traffic increases; freedom from existing obstructions; general accessibility; location with respect to other communities and landing facilities; weather and climatic conditions; topography and soil characteristics; and costs of construction and upkeep.

There are numerous related items as well: population and trading figures for the area, the volume of local flying—including the number of personal aircraft owned in the community; the existence of flying schools and charter lines; and the possibility that the nature of the traffic may make advisable the establishment of several airports of different classes in or near the community.

The third major factor has to do with the character, number, and size of the structures indicated to fulfill the services to be rendered at the airport. Administrative quarters, ticket offices and waiting rooms, buildings for freight handling and hangars for servicing of airplanes will be necessary at the larger establishments. The architecture of these buildings must be taken into consideration in any practical plan. Where it is impossible to forecast the future traffic, and the extent of the services required, it may be wise to erect buildings of a temporary nature, and to postpone more elaborate construction.

A problem peculiar to airport planning arises from the circumstance that the life of such a facility is always much longer than the life of an airplane. The operating plans of aircraft manufacturers and airline operators are made with reference to aircraft now available, and those which are immediately in view. The plans of an airport, on the other hand, must take into account the characteristics of airplanes that will not be designed for perhaps another ten years; and they must be based on estimates of the total amount of local traffic that will be moving by air a generation hence.



FLIGHTSTRIP *related to highway, as proposed by Col. Stedman Shumway Hanks. A is a 1000-ft. graded area; B, 1000-ft. hard surface; C, 11,000-ft. usable runway; D, turf on shoulders*

In planning a major air terminal it is well to be on the liberal side, rather than to underestimate the space required for future growth. For instance, sufficient land area should be preempted to allow for the various types of operation which the airport may ultimately be expected to support. Construction and improvements should be made in conformity with a master program drawn up while the airport is being planned.

Largest Airport Type: the "Air Terminal"

In the largest class, that of the "air terminal," it is difficult to predict how extensive the development must be, and what length of runway must be provided. In constructing a runway it is necessary not only to compute the minimum takeoff distance for the largest planes scheduled to use it, but the heaviest landing weights anticipated have also to be considered. For example, concrete slabs must be strong enough, and drainage must be adequate to insure against sagging.

The maximum gross weights which transport planes will reach in the future is unpredictable. Airplanes of 100,000 lb. are in prospect for the immediate postwar period, with 400,000 lb. as perhaps the economical limit. With increase in the size of the aircraft, landing loads are usually divided among several points of support. An airplane of a gross weight of 400,000 lb. would probably be equipped with three or four separate landing gear units, so that 130,000 or 100,000 lb. would be the maximum landing load to be supported on any one unit.

The assumption that runways must become proportionately longer, as aircraft grow progressively larger, has been invalidated to some extent by design progress made since the start of the war. As a result, it is being demonstrated that giant superliners will not require runways of inordinate length—which connote time lost in taxiing as well as increased runway construction costs.

The takeoff requirements of some of the largest four-engined transports now in service with the Army's Air Transport Command furnish a case in point. One of these

Photos, courtesy American

***Airparks** by the thousand are what the individual flyer will be most interested in. The series illustrated was worked out by the Wichita Chamber of Commerce. Top, an airpark in a residential area; center, in a peripheral industrial area; bottom, close to the downtown business section. Still another type, the* **air harbor**, *appears in the master scheme put out by the Personal Aircraft Council of the Aeronautical Chamber of Commerce of America, in Washington. Airparks cost from $1,000 to $500,000; they supplement but do not attempt to replace the large traffic airport*

planes, with a maximum gross weight of 71,300 lb., requires a runway of only 4820 ft., at sea level conditions.

A larger and more powerful version of this model, having a maximum gross takeoff weight of 79,000 lb., is aerodynamically so efficient, and has engines of such power, that it requires a takeoff run of only 4200 ft. Runs even shorter than this will no doubt be practicable as war-spurred research develops new techniques, bringing additional efficiency to plane performance.

Effect of Rocket-Assisted Takeoff

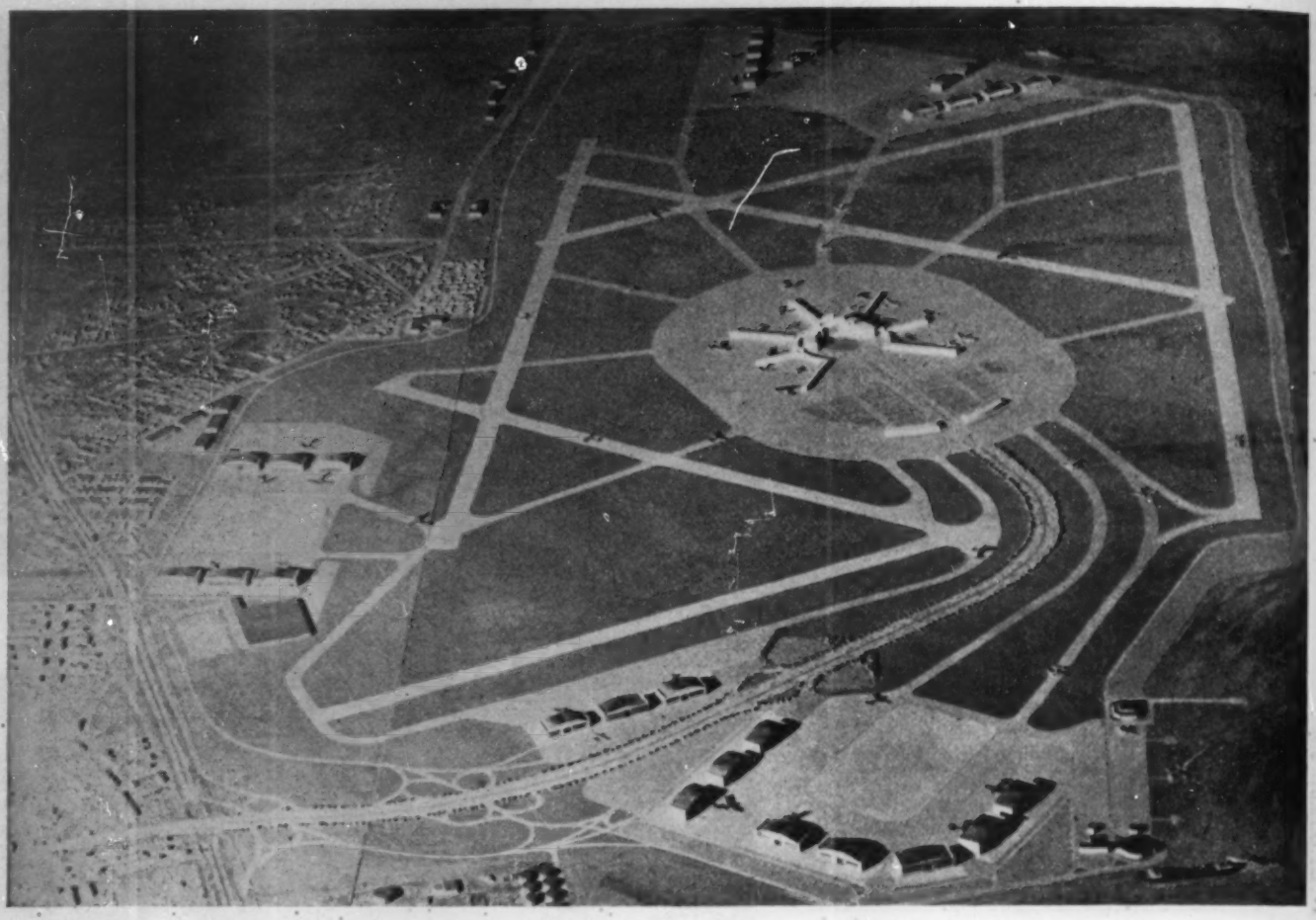
One such development is the rocket-assisted takeoff, now in common use on combat aircraft of all sizes—from carrier-based fighters to bombers and giant flying boats. Rockets, attached beneath a plane's wings, and discharged as the plane starts its takeoff run, impart a powerful instantaneous momentum to the plane, thereby shortening the takeoff run and sharply increasing the rate of climb. It is possible too that as jet propulsion is further refined, it will be used for deceleration and braking. Jet units, installed so as to discharge forward, would materially shorten the landing run.

In taking advantage of such techniques as these, the safety factor must not be overlooked. CAA regulations require runways of sufficient length, so that in the event of engine failure at the moment of takeoff* it will still be possible for a plane to get back onto the runway again.

Personal Aircraft May Use "Air Parks"

Smaller communities, where flying is limited principally to personal aircraft and non-scheduled commercial or charter operations, could

** More accurately, engine failure before climbing speed has been reached.*



be adequately served by a system of "airparks." The establishment of this type of landing facility is being given support by the Personal Aircraft Council of the Aeronautical Chamber of Commerce. Built within the limits of the community, the "airpark" is conceived as forming an integral part of community life. In addition to being provided with runways, hangars and fueling equipment it is proposed that "airparks" be landscaped and made into civic recreation centers.

An "airpark" developed as a Class 1 airport, with runways up to 2000 ft. long, would accommodate most personal aircraft owned in the average small community. However, runways of up to 3700 ft. may be required for some types of personal planes. Paved runways, though desirable, are not requisite for an "airpark" Runways properly sodded, drained and carefully maintained, will provide satisfactory surfaces for the sizes of the planes which will use them.

By increasing the lengths of the runways, paving them, and providing other facilities such as lights and radio traffic control as required by CAA regulations, "airparks" could be made into links in commercial feeder line systems. The location of such "airparks" would present a special problem, since runway lengths and obstructions in the approach pattern and glide paths would have to be taken into consideration.

Airparks are well suited for use in large communities as supplementary airports, to handle small planes excluded from the area of a large commercial terminal. It is possible, also, that an airpark located near the center of a large city would fill the need of a "close-in" airport, as a landing area for air-taxi service to and from the main airport.

Why Helicopters Cannot Take Off from Any Back Yard

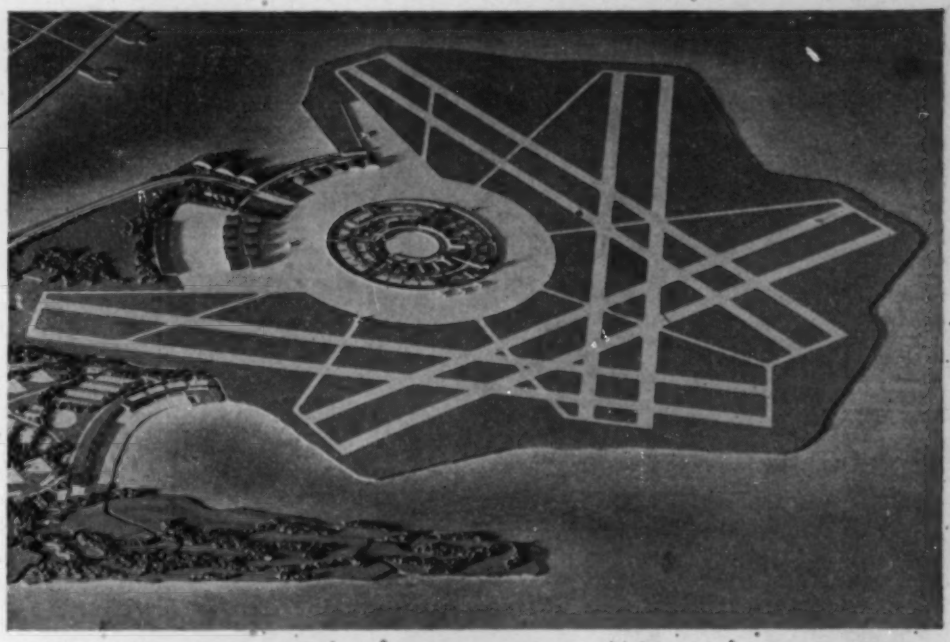
Helicopters, now being produced in quantity for the armed services, and destined for a prominent role in postwar aviation, are well adapted to this form of air-taxi service. These craft can make use of landing areas of minimum size, which could be built at very little expense in even the most congested sections of a metropolis.

Landing areas of some sort must be provided for the current models of 'copter, for—contrary to popular belief—"back-yard" landings and takeoffs are not yet practicable for these craft. This is chiefly because of the powerful down-draft from the rotors. A helicopter taking off from the average suburban back yard would fill all the neighbors' houses with dust, and sweep wash from the lines.

The "Flightstop," "Air Harbor," "Flight Strip"

The Personal Aircraft Council is likewise the proponent of the "Flightstop," which is designed to provide intermediate or emergency landing areas near highways or settled districts for the use of private flyers on cross-country flights. It is proposed that they be built in L or T shape, with runways about 1800 ft. by 300 ft. Where the direction of prevailing winds is fairly constant, one runway would be sufficient. No hangars or service personnel are contemplated for these fields. It has been suggested

Elmer L. Astleford photo



MODELS FOR THE FUTURE. *To the left, across-page, model showing the final runway plans adopted for the New York airport at Idlewild; above, model of a proposed Detroit airport in Lake St. Clair; bottom of page, U-shaped floating dock, anchored to shore, used by the Navy.*

The Idlewild scheme shows only the first six runways, now under construction. Design for the ultimate, redoubled capacity awaits the outcome of the engineering debate on the question of "tangential" vs. "parallel" arrangement in double runways. The elaborate Detroit project, backed by a committee of prominent citizens, will be fully presented in a later issue. For Idlewild, J. Downer, engineer, and Wharton Green, associate; architects, Delano and Aldrich. For Detroit, Smith, Hinchman and Grylls, architects and engineers, George W. Warner designer.

that a small building containing rest rooms and a telephone, a coin-in-slot fuel vending machine, would provide all the service required.

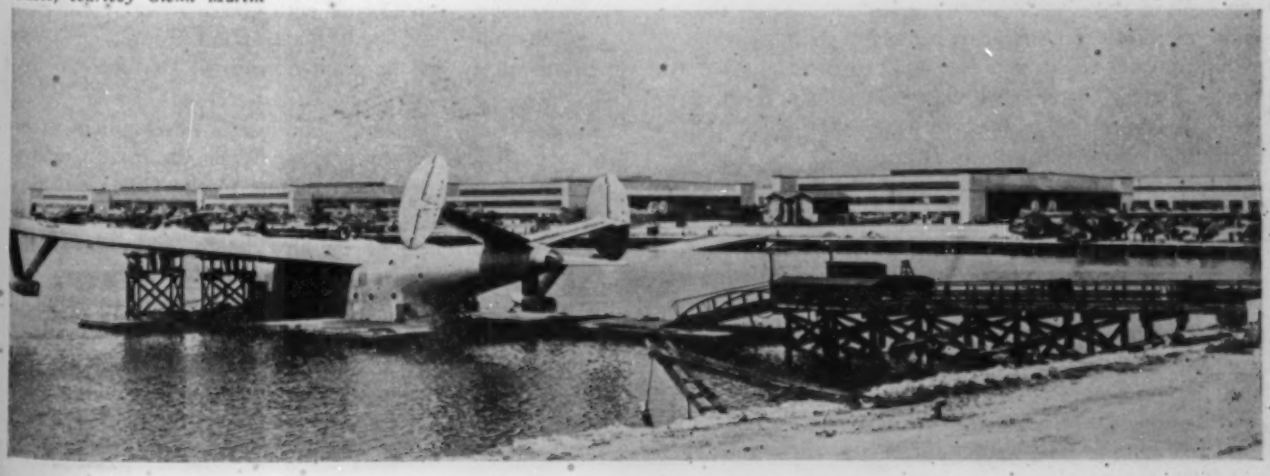
To facilitate water landings for personal aircraft equipped with floats or of the amphibious type, the Personal Aircraft Council has visualized the establishment of "Air Harbors." These would be set up on bays, lakes or rivers adjacent to towns, or to resort or recreational centers. The Air Harbor could assume many forms, depending on the number of planes to be accommodated and the amount of service to be provided.

At their simplest, Air Harbors would consist merely of U-shaped floats connected with the shore by a dock or walk-way. Suitable ramps for hauling planes out of the water, and hangars for storage and servicing, could be provided if their use justified the added expense. It is expected that docking and servicing facilities for large commercial flying boats will be included in plans for metropolitan airports where international service, using that type of aircraft, is planned.

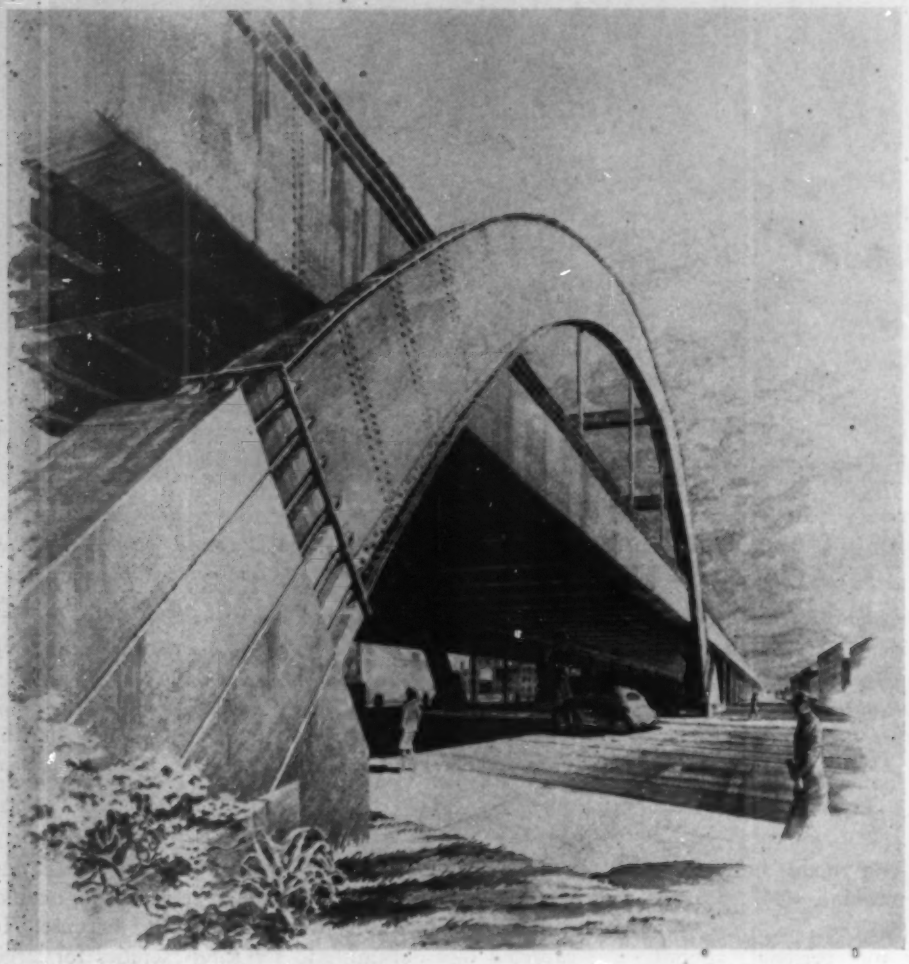
Also designed for emergency use, and to provide convenient landing and takeoff areas, "Flight Strips" are being advocated by a group headed by Col. Stedman Hanks, whose plans are tied in with the nation's highway system. A Flight Strip would be located adjacent to a public highway, or could be a part of a highway right-

(Continued on page 128)

Photo, courtesy Glenn Martin



ARCHITECTURE FOR A HIGHWAY PROJECT



Proposed John C. Lodge Expressway and Civic Center for Detroit

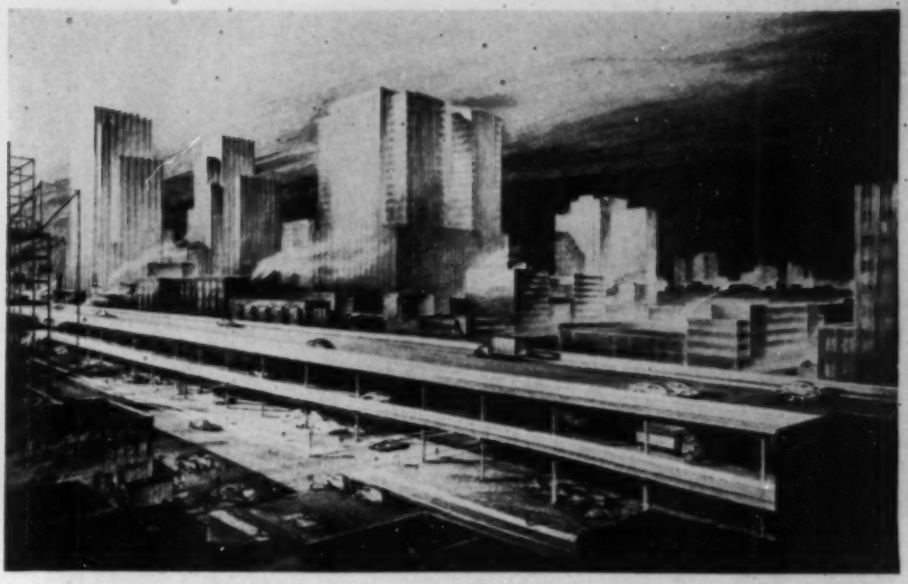
Giffels & Vallet, Inc., L. Rossetti, Associated Engineers and Architects

IF IT MIGHT seem strange that a big-city elevated highway should be considered an architectural project, that in itself would seem to be a sad commentary on the state of the nation. It is certainly logical that a highway project should be considered by the city fathers as an architectural problem, and not simply a job for engineers. True, the engineering must come first, and along with it some heavy thinking about routes and real estate. But certainly if the planning stops there, the project will fall far short of its full effectiveness.

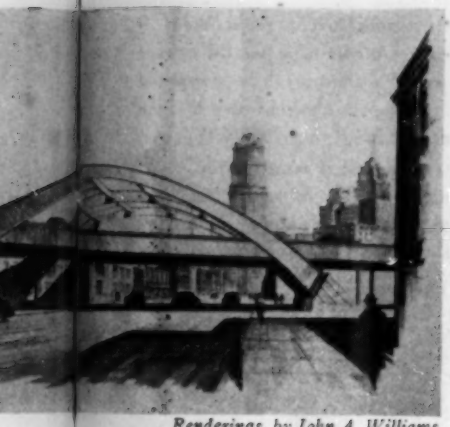
In this instance, this firm of engineers and architects was retained by the Wayne County Road Commission to study possible routes for the proposed downtown highway, and of various structural systems, and to prepare studies of possible architectural treatments. The last-mentioned was no casual addition to the assignment, for it was recognized that in the downtown sections the highway would probably have to be an elevated structure, and that as such it was bound to be critically studied for its visual contribution, either negative or positive, to the city.

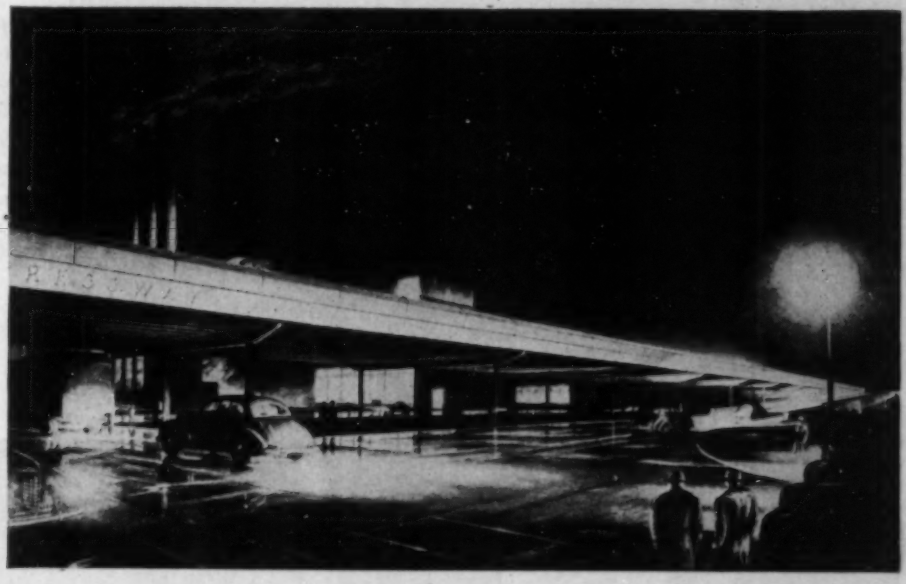
The studies led to a decision to use the double-deck structure downtown. In the intermediate areas, the single-deck structure would be used, with three lanes in each direction. In purely residential areas the present decision is to use a depressed highway. The entire scheme contemplates the construction of 13 miles of highway, and would connect downtown Detroit with Grand River Avenue and Couzens Highway, both major trunk routes, at points approximately 7 miles from downtown Detroit.

Detroit Civic Center. This was a development or extension of the highway project. When the Road Commission presented its proposed route to the City Council, a question was raised as to the feasibility of routing an elevated structure through the area designated by the Detroit City Plan Commission for a proposed Civic Center. The architects were then commissioned by the Road Commission to design a civic center in general composed of the same buildings already contemplated, but including the John C. Lodge Highway. Photographs on following pages show models constructed by the architects, models which, incidentally, have received excellent publicity.



The two Wolff pencil renderings (John A. Williams, delineator) show preliminary studies of the double-deck portion in a downtown area (right) and (below it) a night view of single-deck portion in an industrial area

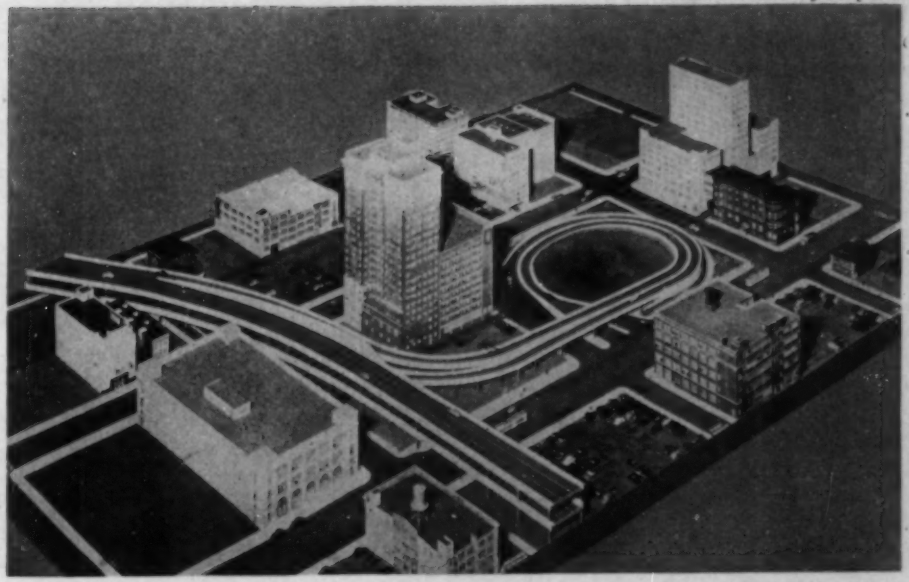




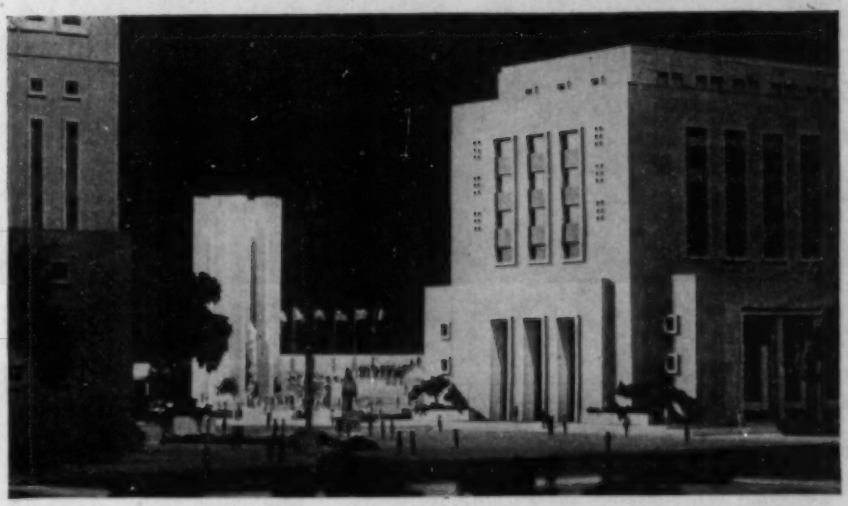
Renderings, by John A. Williams

Grossman-Knowling Co. photo

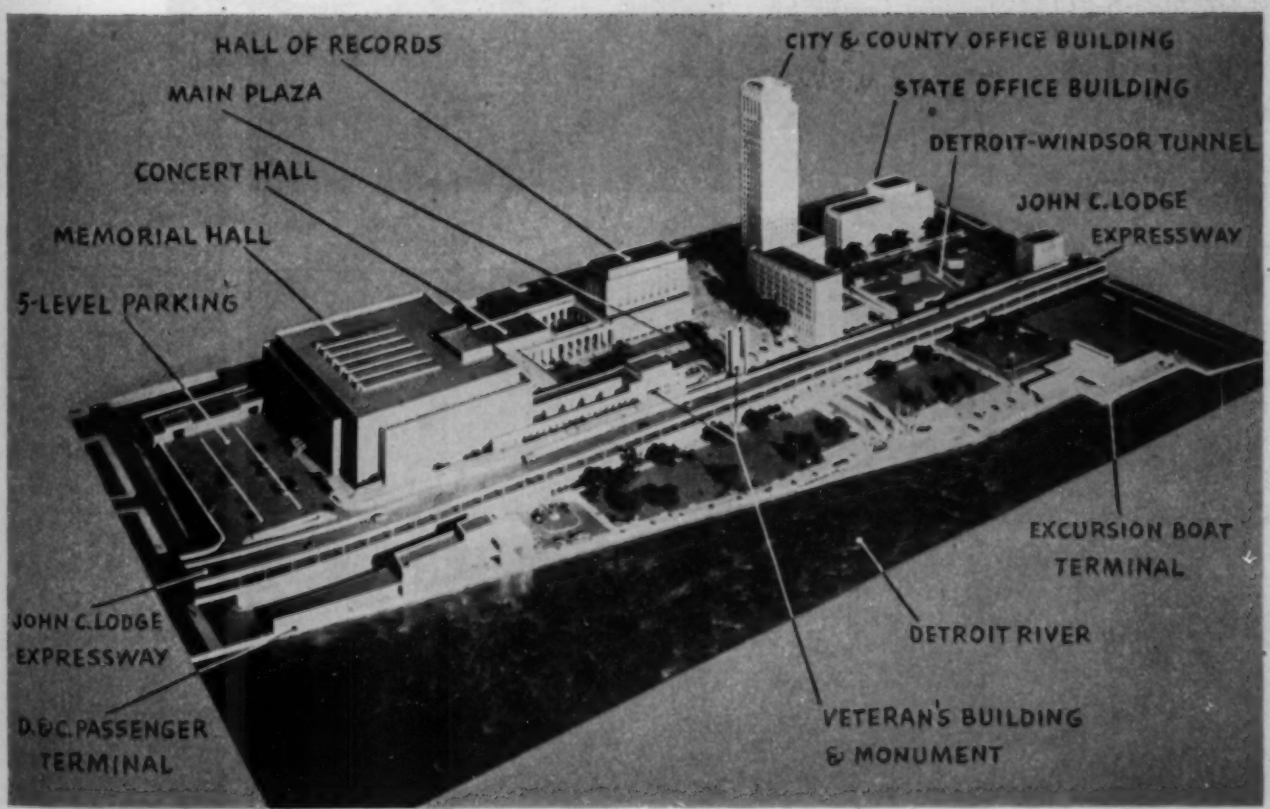
Photograph of a model, built by the architects, of a section of downtown Detroit as it would look after building of main downtown ingress and egress ramps. Buildings shown are existing buildings in the area

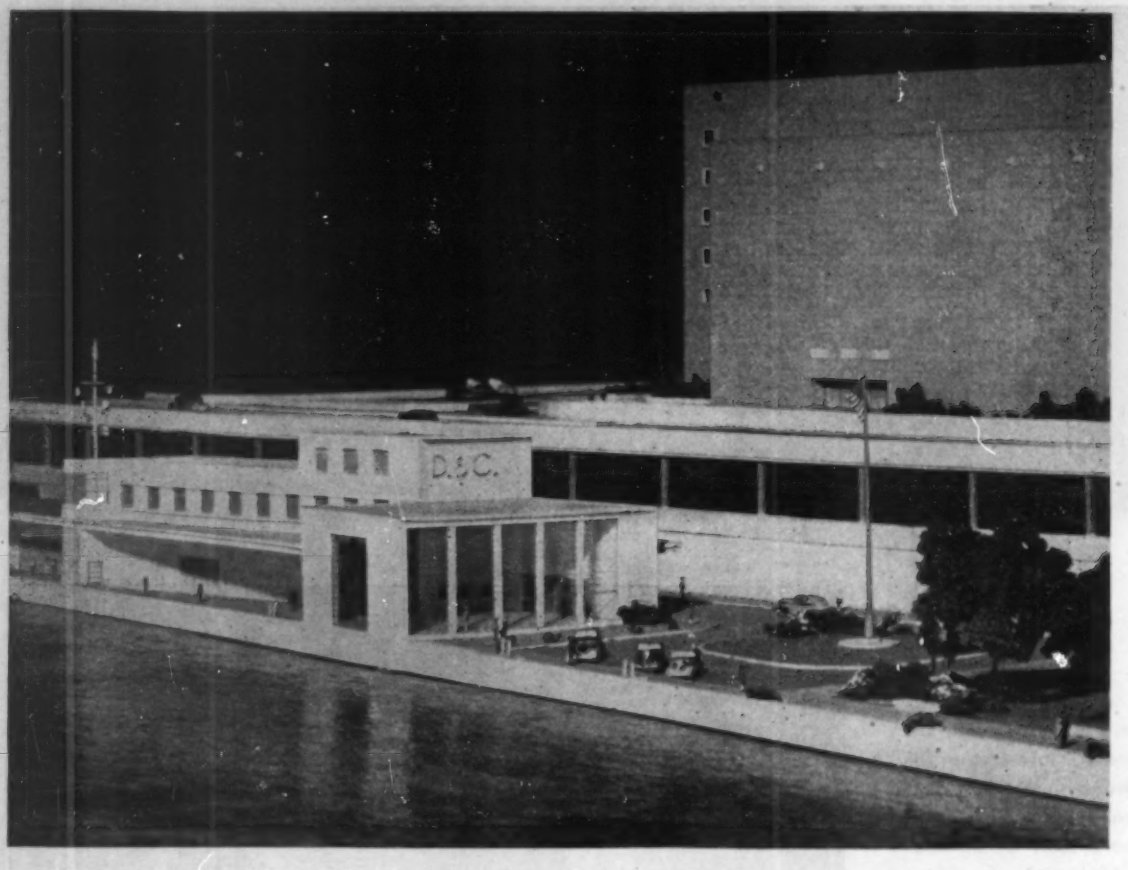


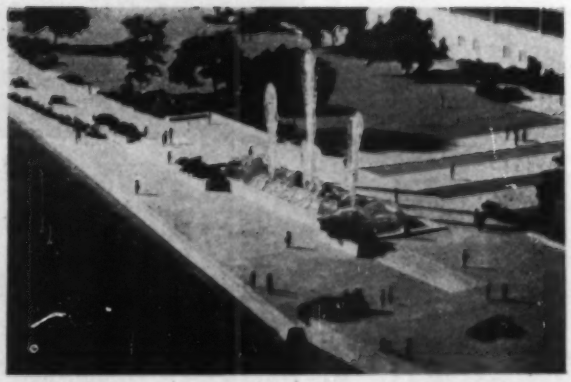
Above: general river front view of downtown Detroit as it would appear after construction of the proposed Civic Center; photograph of the architects' model has been superimposed on an actual photograph. Left: a general view of the buildings (models) fronting on Jefferson Ave. Below: same group looking to river



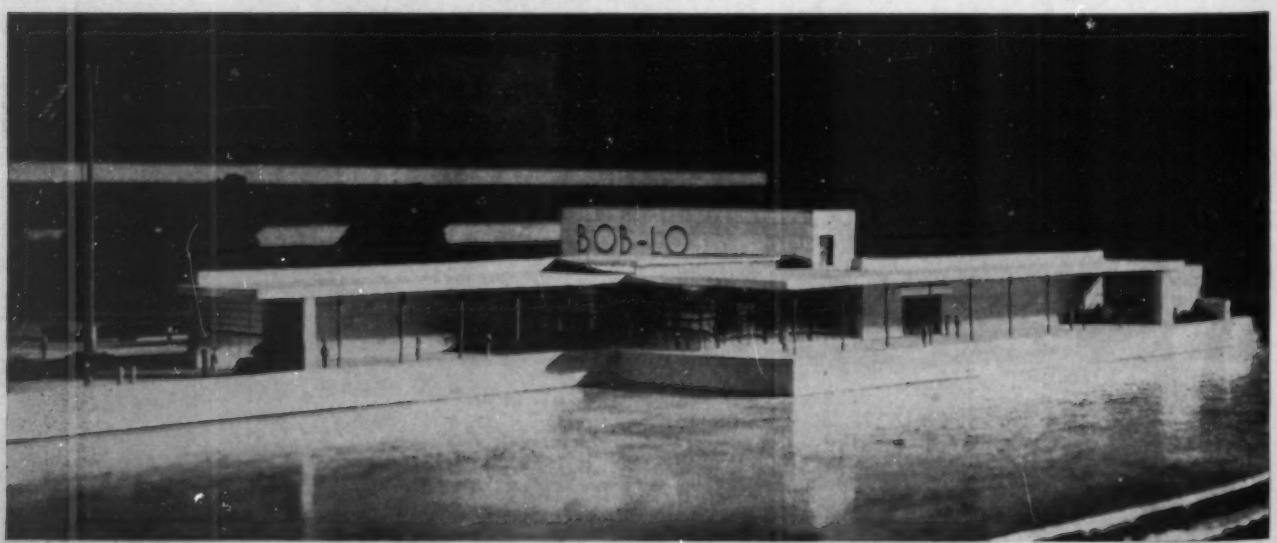
Above: model of State of Michigan Office Building proposed for the Civic Center group; this is the Jefferson Avenue front (north elevation). Right: view between City-County Office Building and Hall of Records (right), War Memorial in center. Below: general view of the Center, looking toward the northeast







Plans for the Civic Center contemplate integrated river front development. Above: proposed terminal for Detroit & Cleveland Navigation Co. boats. Right: model of river front fountain on axis of Woodward Avenue. Below: terminal for river excursion boats operated by "Bob-Lo"



Architectural Record's Building Types Study Number 96

THE POSTWAR HOUSE

By Walter F. Bogner

Associate Professor of Architecture, Harvard University

1810

An old-time group of cottages for mill workers, built about 1810 at Fiskeville, Rhode Island

Haskell Photo from The Monograph Series

1942

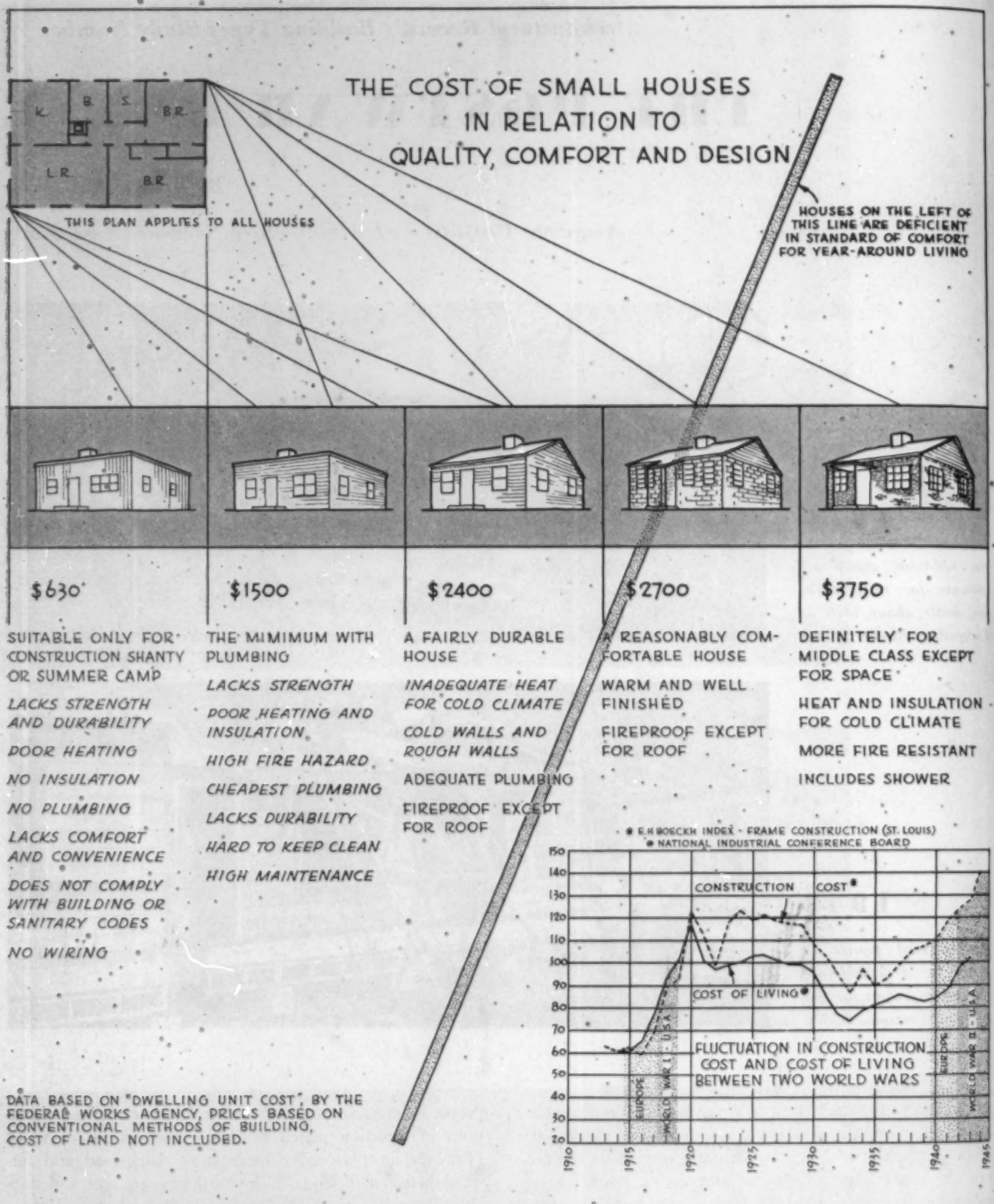
Putting roof panels in place in a 5,000-house Homasote project for war workers, Portsmouth, Va.

With a disturbance as far-reaching and unprecedented as World War II still in progress, and with the uncertainty of the national policies, it is naturally impossible to forecast the exact steps which the progress in house design will take. It is more than likely that the changes may be fairly drastic and rapid in progress as a consequence of the war and its influences on the life of the people. In looking at the past one sees the road that has led us to the housing of today as a rather erratic path in which the people's fondness for one style or another marked deviations in direction which extended over periods of years. However, in perspective these sways backward and forward between different fashions disappear, and a reasonably direct line to a definite goal becomes apparent.

The goal is defined as better living for a greater number of people. These articles are an attempt to trace the line of direction of the path of progress which leads towards its attainment.

PART I. *The Direction of Progress for Postwar House Building*

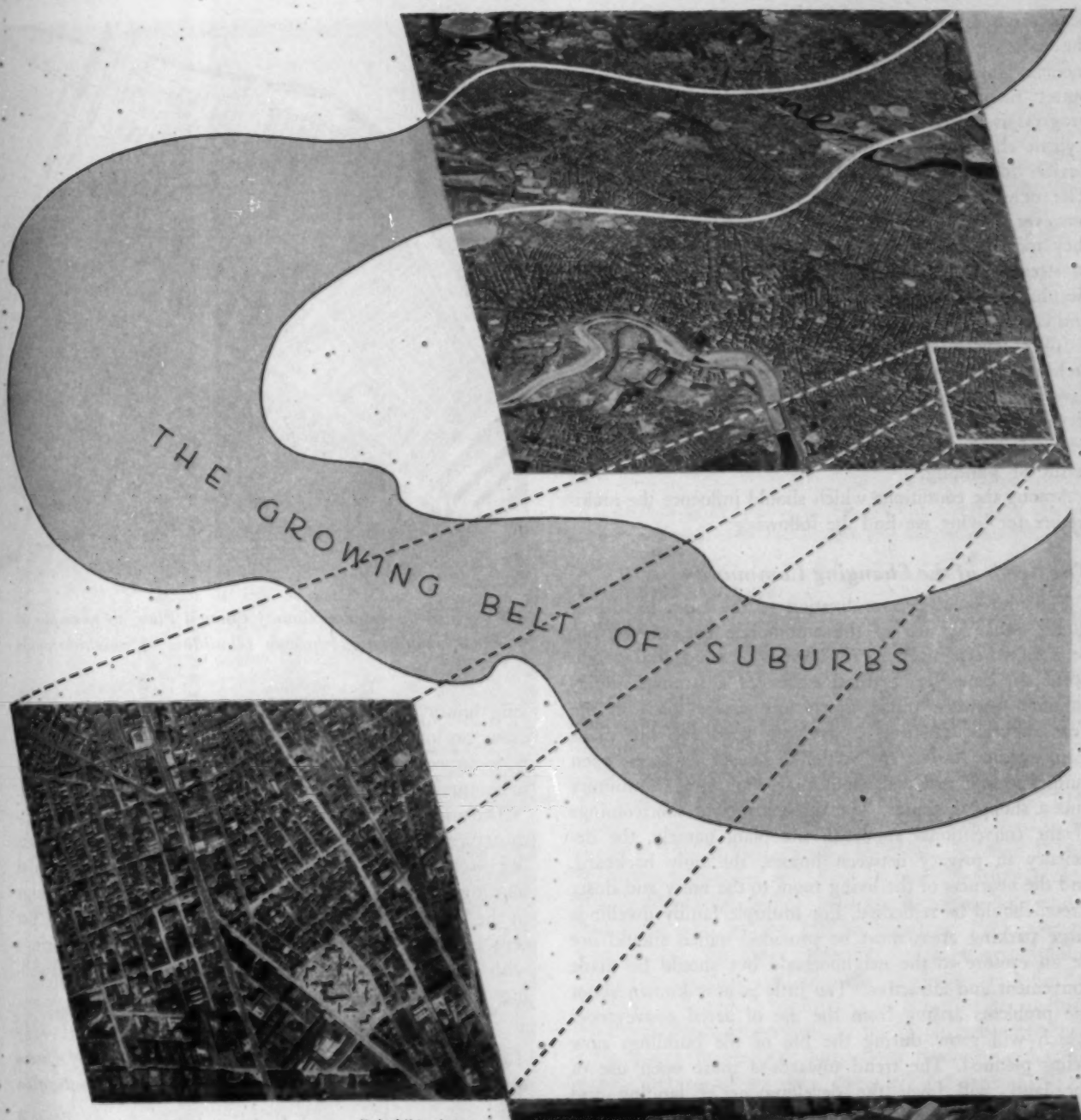
It has been officially observed that progress in the architectural design of the small house has been lagging. A statement to that effect is contained in the 1941 report of the Temporary National Economic Committee which goes on to explain, "The architectural profession, within whose province all design considerations lie, has regarded the field of low-cost housing an incidental one and certainly not a profitable one. . . . The result of the architect's neglect of the low-cost field has been a notable lack of progress in both the method of production and the



article produced." The validity of this statement is borne out by similar comments, in other well-reasoned analyses of more recent date.

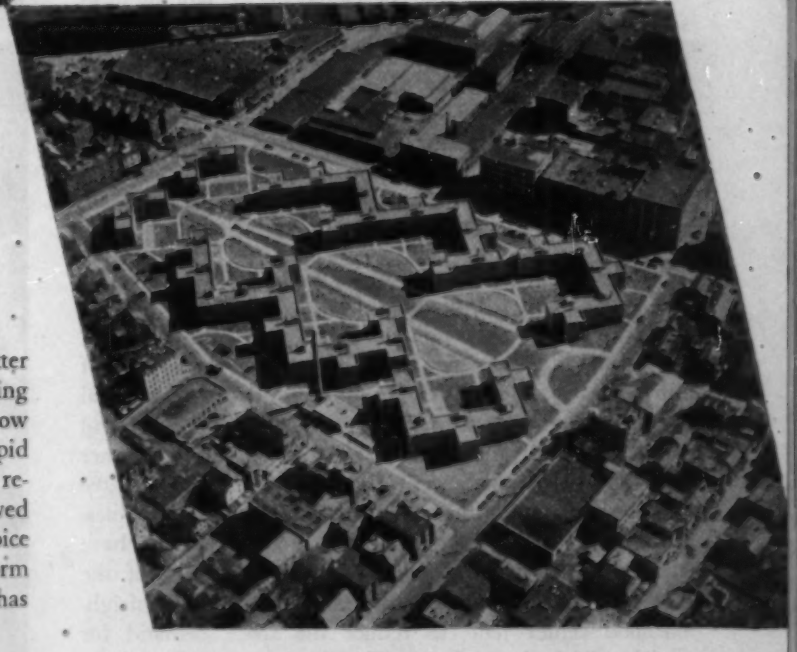
The architect is not alone to blame for this situation. He has been restrained from a fresh attack on the problem of small house design by a series of objections to innovations. He has been held back by an attachment to the "old and time tested" by the conservative element within the building public, the building industry, and the lending institutions. The FHA regulations also hamper experimentation. There is always the danger that the best of new designs might be barred from building loans by officers unsympathetic to the modern due to non-conformity to neighborhood characteristics or to uncertainty over public receptivity.

There exists a valid challenge to that stratum in the architectural profession and the building industry that still hopes to perpetuate the old patterns for building, to concern itself more with the progress of the design of the low-cost house. The futility of the effort to recreate the past under conditions averse to it and the value of progress in keeping with the times cannot be denied. The im-



Fairchild photos

Something of the magnitude of the urban problem is seen in this series of photographs of Cambridge, Mass. Newtowne Court housing project clears a portion of the slums, but a pitifully small portion it is



mediate future demands the accomplishment of better housing for a greater number of people, and the raising of the standard of living. Architectural design must now be carried rigorously forward to stay abreast of the rapid strides of technological progress. In a poll conducted recently by a popular magazine* no type of design received more than 16 per cent of the votes. Though first choice was for a traditional house, the majority were for some form of modern design. The public's interest in the new house has

* *Small Homes Guide, 11th Edition.*

been aroused to a point of expectation which is beyond the building industries' ability of reach within the immediate postwar period. It must be made clear at the outset that an understanding of what is implied by progress is still limited and confused. To some it means stylistic change; to the majority, merely more and better devices for the increase in leisure and physical comfort. The new appearance and the improved equipment are, however, only incidental parts of progress. For example, they may be considered similar to the change pertaining to streamlining in the automobile. Progress demands a simultaneous attack of all issues involved in house design and construction, to the end that people may benefit from a fuller conception of living at a lower cost. Therefore, architectural progress in the postwar house, germinates in new problems now manifesting themselves which exact fresh solutions. Out of the honest efforts to solve new demands with ever increasing precision will grow the new forms of building.

Among the conditions which should influence the architecture for living we find the following:

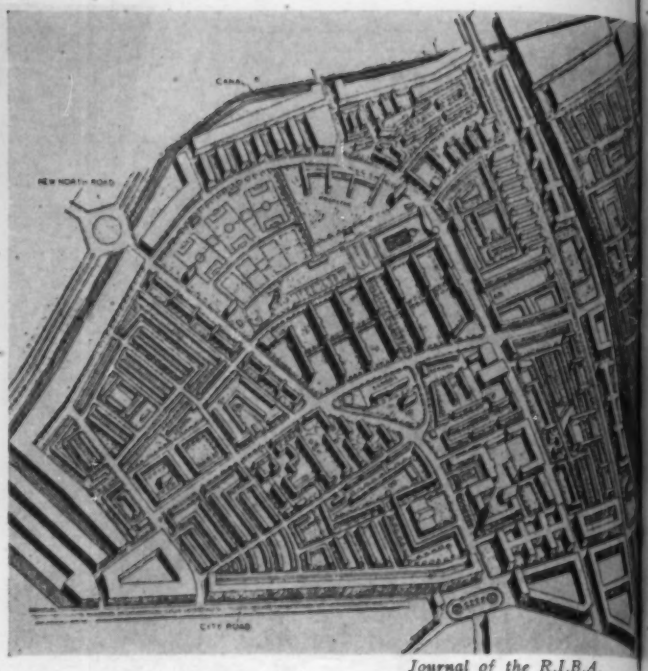
The Needs of the Changing Community

The process of decentralization of the cities incidental to the expanded use of the automobile has, as yet, not been fully recognized in the design of residential neighborhoods. However, a trend exists for a stronger differentiation between traffic streets and access roads in the new suburbs. There is a growing need for site plans assuring safe streets; and with the houses set in an open landscape and grouped about playgrounds, a community and a shopping center. The three principal shortcomings of the conventional suburban site plan, namely, the deficiency in privacy between houses, the ugly backyard, and the nearness of the living room to the noisy and dusty street, should be remedied. For multiple family dwellings large parking areas must be provided which should not be an eyesore to the neighborhood but should be made convenient and attractive. Too little is now known about the problems arising from the use of aerial conveyances which will grow during the life of the buildings now being planned. The trend towards a more open use of the land, will favor the development of landing and storage facilities for helicopters when the need arises.

Decentralization of urban areas brought with it the decay of the central core of the city. Need for the redevelopment of these blighted tracts is now recognized. In the process of rebuilding, housing is being designed with sufficient recreational space to bring the amenities of life in the country or suburbs to the centers of the cities.

Social Changes

The war and the preceding depression have left their effect on the social conditions in all parts of the world. The contrast in the size and character of the houses of different social groups is disappearing with the gradual elimination of the crass stratification of society. Men and women of all walks of life have been brought together through their experiences of the war, and many have acquired new skills through their work behind machines. Communal services for child care and for health have assured themselves of their place in the pattern of the community. Recreational facilities provided in the neighborhood center tend to reduce the space demand for social activities in the house. The old time servant working



Journal of the R.I.B.A.

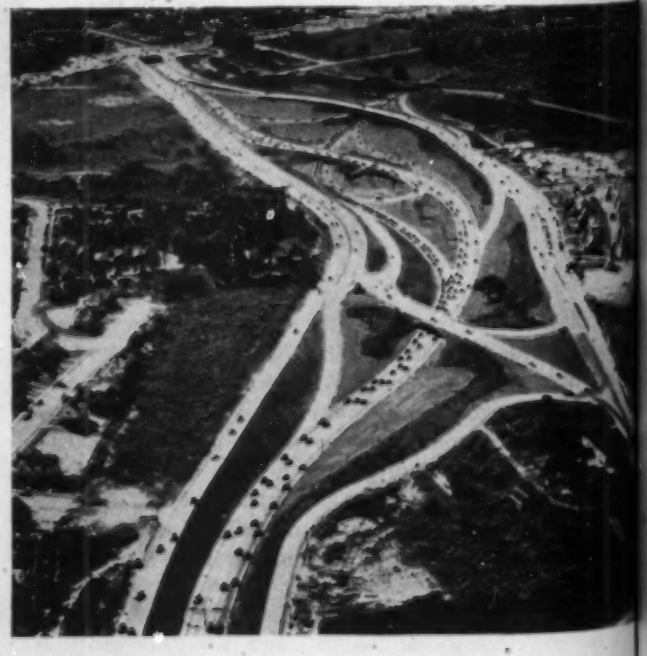
A section of the London County Council Plan, an example of planned rehabilitation through rebuilding of neighborhoods

long hours for small pay at household chores practically exists no longer. All these factors working hand in hand with an economic need for the lower-priced house tend to compress dwellings into smaller but more efficient units.

The migration of the population to new centers of industry combined with fluctuations in employment is making itself felt. In the past decade an increase in rental housing has developed: ownership of non-farm dwellings in the U. S. declined from 45.9 per cent in 1930 to 41.1 per cent in 1940. The greater use of rental housing brings with it a demand for a certain standardization of dwellings to fit average needs.

A glimpse of one small section of New York's highway system directs attention of a city's problem of decentralization

Fairchild



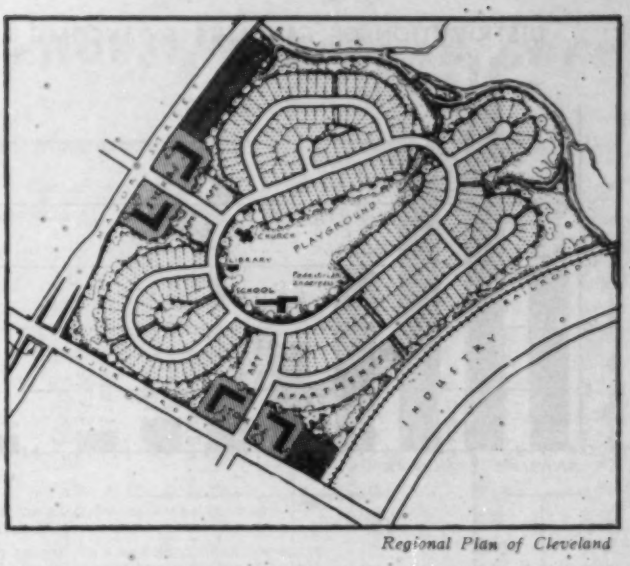
Technical and Scientific Advance

Though a decided growth in the use of stock building parts has been apparent for a considerable period, the complete prefabrication of houses has only obtained its initial impetus from the need for the demountable defense house. There is an indication that many war industries will convert themselves to the production of buildings or parts thereof. The war has taught much in production techniques. Many of the machines and processes developed for the rapid and efficient building of ships and aeroplanes will help to carry forward the development of prefabrication. The need for a technique of construction which will reduce cost is evident.

A scientific approach to the design of housing manifests itself. The physiological and psychological requirements for healthful living of the family unit have been defined by a Committee on the Hygiene for Housing of the American Public Health Association. Research labora-

A conventional suburban site development. Note the central garages which spoil landscaping and require excessive paving. Right: private residential construction follows curve for more expensive automobiles. From T.N.E.C. Monograph No. 8

tories are busy developing and testing new materials and mechanical devices. Anticipated changes in heating, illumination, and in the conservation and the preparation of food are bound to exert decided influences on the planning and design of the house. The need for a reduction in household effort is recognized. Fatigue problems have been studied in relation to industrial work. The knowledge gained there will now be applied to the design of the house. Much has already been written about that still mythical "self-cleaning" house. Many of the new materials and new devices will help to bring its realization nearer the attainable limits.



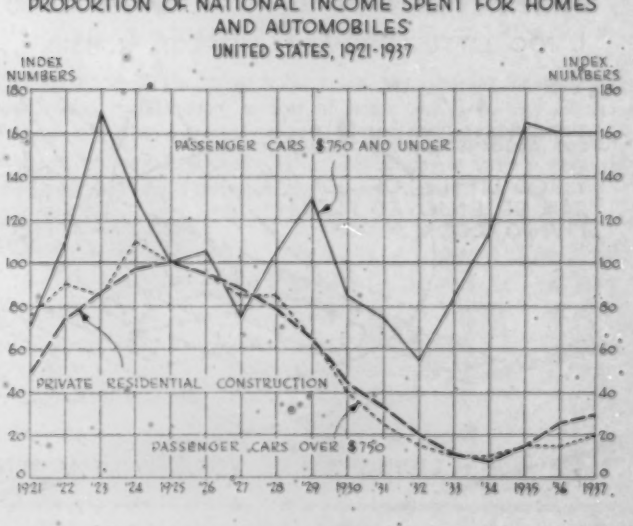
Regional Plan of Cleveland

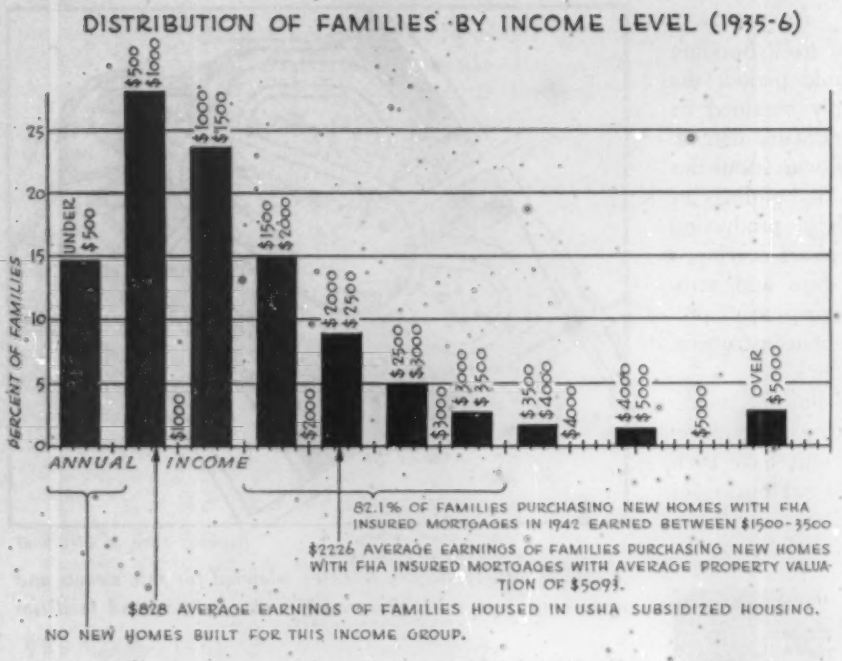
A suburban neighborhood center, planned for safe streets and open landscape, with playground and neighborhood facilities

Economic Changes

Foremost among all influences on changes in house design is the need for the lower-priced dwelling. This is demanded in the social interest of bringing new and decent houses to a greater number of people. It is also necessary for the realization of the large construction volume required for postwar prosperity.

For some years there has been a downward trend in the cost of dwellings. The average valuation of FHA insured new single-family properties in 1936 was $6,255, while in 1942 it had dropped to $5,093. Between 1934-37 the average dwelling unit built in public housing projects by the PWA cost $4,975, land not included. The equivalent unit, built by the USHA based on 1942 averages, cost $3,924. The latter reduction has been accomplished primarily through simplification in design and the use of more economical materials and construction methods. However, construction costs on the whole have risen, with only minor downward fluctuations during the last ten years. According to data compiled by the FHA, the appraised value of new houses and lots has dropped while at the same time construction costs rose. Reduction in houses sizes (fewer rooms) was partially responsible for this lowering in house cost. Increase in construction




DISTRIBUTION OF FAMILIES BY INCOME LEVEL (1935-6)
PERCENT OF FAMILIES
ANNUAL INCOME
UNDER $500
$500 $1000
$1000 $1500
$1500 $2000
$2000 $2500
$2500 $3000
$3000 $3500
$3500 $4000
$4000 $5000
$5000
OVER $5000
82.1% OF FAMILIES PURCHASING NEW HOMES WITH FHA INSURED MORTGAGES IN 1942 EARNED BETWEEN $1500-3500
$2226 AVERAGE EARNINGS OF FAMILIES PURCHASING NEW HOMES WITH FHA INSURED MORTGAGES WITH AVERAGE PROPERTY VALUATION OF $5093.
$828 AVERAGE EARNINGS OF FAMILIES HOUSED IN USHA SUBSIDIZED HOUSING.
NO NEW HOMES BUILT FOR THIS INCOME GROUP.

"The country now has the greatest need for houses costing less than $5,000." Adapted by the author from a chart in "Consumer Incomes in the United States," by the National Resources Committee

cost roughly parallels the rise in the cost of living. To make possible the continuance of a decrease in the cost of the house, in spite of this increase in construction cost, it will be necessary to change building techniques and design. Mass production is the primary hope for a reduction in house cost. This method made the low-priced automobile possible. Statistics show that in contrast to house building, industries which mass-produce passenger automobiles, electric washers and household refrigerators have been able to lower prices commensurate with the expanded sales volume.

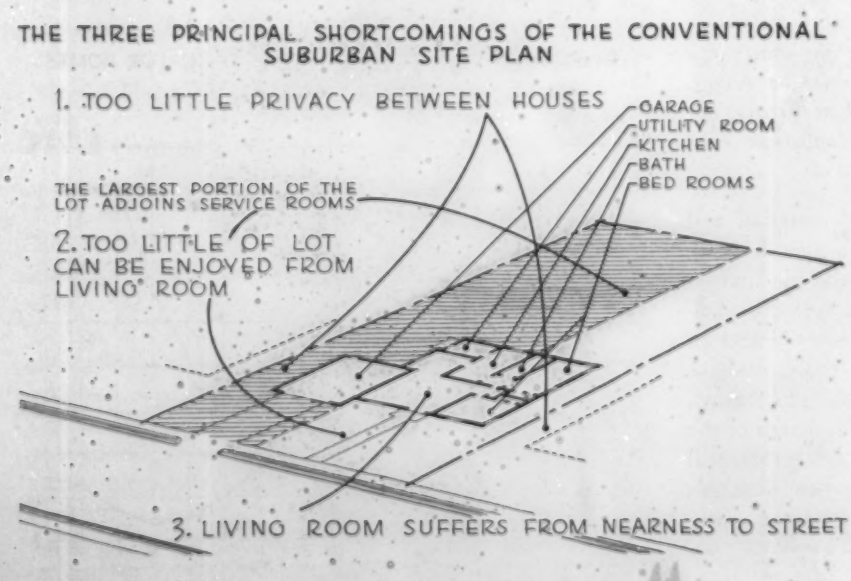
The country has now the greatest need for houses costing less than $5,000. This price range reaches the middle income group within which the number of families has been relatively stable throughout good and bad times. From the 1935-36 chart, showing the distribution of families in the U. S. by income level, it can be seen that the largest number of families earn less than the $2,500 required for the $5,000 house.

It is interesting to compare the national expenditures for homes with those for automobiles. During the lean years of the 1930's while expenditures for house construction were taking a pronounced downward sweep, expenditures for automobiles increased. Through booms and depressions that portion of the national income going towards automobiles stayed on a more or less even level while that for home construction declined. The public kept on buying and paying for cars while it stopped building and saved on rent.

This situation partly indicates the need for more decent new houses which have within them a sufficient number of attractive features to make them more acceptable.

Summary

The factors which mark the direction of progress in house design sum themselves up into lowering of cost, improvement in design to fit the changing conditions, and the addition of features which add to the comfort of living. The background to the influences on the changes in design has been outlined. Before examples of designs which have been developed under their influence can be shown, it becomes necessary to analyze in greater detail the changes in building techniques. Through the latter the greatest savings in housing cost can be made.


THE THREE PRINCIPAL SHORTCOMINGS OF THE CONVENTIONAL SUBURBAN SITE PLAN
1. TOO LITTLE PRIVACY BETWEEN HOUSES
GARAGE
UTILITY ROOM
KITCHEN
BATH
BED ROOMS
THE LARGEST PORTION OF THE LOT ADJOINS SERVICE ROOMS
2. TOO LITTLE OF LOT CAN BE ENJOYED FROM LIVING ROOM
3. LIVING ROOM SUFFERS FROM NEARNESS TO STREET

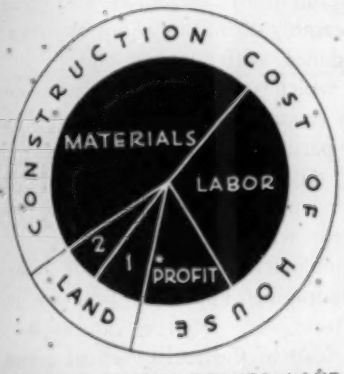
The site plan of the conventional suburban subdivision has not been notably successful in developing land to provide pleasant views and privacy. Safer streets are another obvious possibility

WHERE THE HOUSING DOLLAR GOES

COST OF HOUSE AND LAND

(Each item expressed as per cent of total cost of house and land)

1. Cost of Materials at Site:	Cost of Manufacture	Cost of Distribution	Cost of Transportation	Combined Profits	Delivered Price
Lumber	4.19	4.64	1.42	1.60	11.85
Masonry	2.17	0.73	0.30	0.25	3.45
Concrete and mortar	1.70	0.86	0.33	0.44	3.33
Plaster, lath and wallboard	1.31	1.54	0.46	0.96	4.27
Insulation	0.11	0.06	0.03	0.04	0.24
Roofing	0.62	0.32	0.10	0.21	1.25
Flooring	1.35	1.02	0.24	0.34	2.95
Millwork	2.88	3.10	0.38	1.00	7.36
Paint	0.88	0.34	0.04	0.15	1.41
Finish hardware	0.29	0.29	0.03	0.10	0.71
Plumbing	3.63	0.90	0.35	0.60	5.48
Heating	0.89	0.30	0.09	0.14	1.42
Electrical	0.39	0.40	0.05	0.14	0.98
Miscellaneous	0.49	0.30	0.08	0.13	1.00
All materials	20.90	14.80	3.90	6.10	45.70
2. Cost of Site Construction Labor					29.50
3. Contractor's and Subcontractors' Overhead and Profit					12.30
4. Total Cost of House					87.50
5. Value of Unimproved Land (including profit on land)					7.00
6. Cost of Land Improvements (including profit on improvements)					5.50
7. CAPITAL COST					100.00



1 VALUE OF UNIMPROVED LAND
2 COST OF LAND IMPROVEMENTS
* CONTRACTOR'S AND SUBCONTRACTORS' PROFITS.

MONTHLY COST TO OWN

(Assumed Cost of house and land is $5,000)

1. Initial Cash Payments:

Downpayment (90% mortgage)	$500
Closing fees and commissions	100
Total cash payments	$600

2. Monthly Cost for:	First 25 years	Next 15 years	Average for 40 years
Interest (5%)	$11.31	—	
Amortization (25 years)	15.00	—	
Loss of interest on cash payment (3%)	1.50	$ 1.50	
Taxes (2½%)	10.42	10.42	
Hazard insurance (2/10 of 1%)	.83	.83	
Maintenance ($100 per annum)	8.33	8.33	
Total monthly cost	$47.39	$21.08	$37.52

EFFECT ON MONTHLY COST OF REDUCTIONS IN VARIOUS ITEMS

Monthly costs of housing can be cut by reducing any one of the following major items: interest, amortization, taxes, maintenance, or cost of house and land. The relative effect on monthly costs of a 20% reduction in each of these items separately, with all other items remaining unchanged, is shown below. Reductions in two or more of the items together will of course have a correspondingly greater effect.

Major item and 20% reduction in each	Reduction in monthly cost First 25 years	Next 15 years	Average for 40 years
Interest (from 5% to 4%)	5.4%	0	4.3%
Amortization (from 25 years to 31¼ years)	4.5%*	0	—6.5%
Taxes (from 2½% to 2%)	4.4%	9.9%	5.6%
Maintenance (from $100 to $80 per annum)	3.5%	7.9%	4.4%
CAPITAL COST (from $5000 to $4000)	16.4%	11.9%	15.4%

*Savings over 31¼ years; but savings more than offset by added interest.

POINTING OUT that widespread confusion on housing costs and their relative importance has been an obstacle to cost reduction, the National Housing Agency has prepared the accompanying analysis; recently published in a report, "Housing Costs." Summarizing the figures, the report adds: "The conclusion is presented that reductions in the capital cost of the house and land are most effective in reducing monthly charges, although important savings to the homeowner are possible through lowering the interest rate and by reducing taxes and maintenance charges . . ."

The report mentions many often-quoted partial truths about housing costs, and pins some of them down in the last table here, adding:

"A 20 per cent reduction in the cost of house and land (from $5,000 to $4,000) will reduce monthly costs of housing to the owner 15.4 per cent averaged over 40 years, which is assumed to be the life of the house. This reduction in monthly costs is more than three times as large as the saving resulting from a 20 per cent reduction in the interest rate."

PART II. *The Direction for Progress in the House Building Techniques*

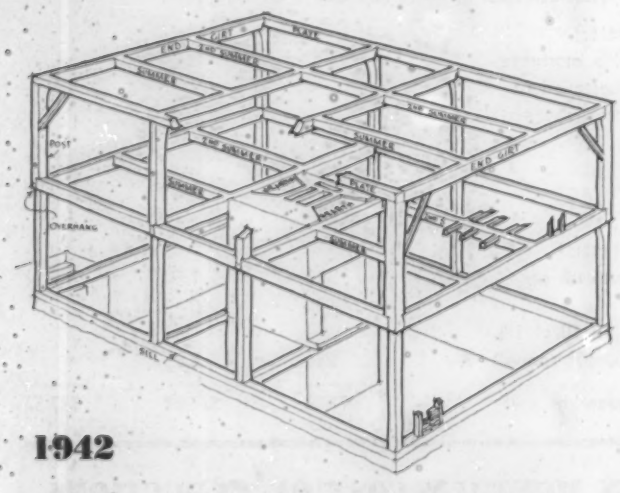
THE MOVEMENT toward mass production in the building industry proclaims a drastic departure from the conventional ways of building. Though the new methods are still in an early and somewhat confusing stage of development, it is possible to trace, in the numerous experiments, a direction of progress.

Industry has certainly not been lacking in ideas, nor in a willingness to experiment. A flood of new products will be forthcoming at the end of the war. It now would be impossible to put into one article even the briefest listing of the great number of valuable proposals for prefabrication which have come into existence since the Century of Progress Exposition in Chicago. As helpful as a compendium of the new materials and ideas might be, it appears more important to select examples from them which indicate the direction of progress that leads towards the attainment of the ultimate objective in house building, namely, the realization of better houses at a lower cost.

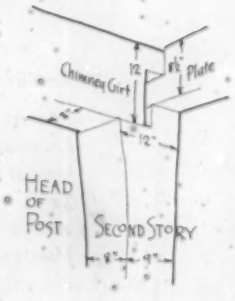
The illustrations at the left compare the original practice of building colonial houses with a new method used at the Glenn Martin Defense Houses in 1942. The difference between them represents two centuries of experimentation and learning in house building. Surprisingly, the principle of using a skeleton frame with curtain walls is the same in both cases. However, disregarding the fact that the new method illustrated is still experimental and not necessarily typical of the new building techniques, it shows a trend in construction which is just becoming pronounced. This trend is the use of more efficient and lighter weight members which result from calculations and tests; combined with the site-assembly of buildings out of manufactured parts in accordance with precise plans.

One of the elements which impedes the progress in house design is the deeply rooted habits of those concerned with building. This is particularly accentuated in the aesthetic field. However, on the other hand, the public is eagerly awaiting improvements in the practical phases of house building, especially where they entail economies. Consequently, in the technological developments of building rests the most encouraging hope for progress in house design.

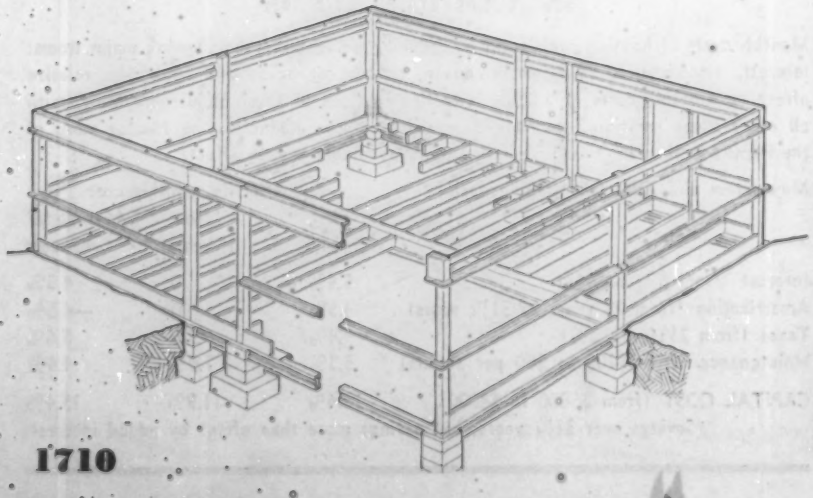
Three practical factors lead to the realization of better houses at a lower cost: first, the effort to create savings in building cost through simplification of construction



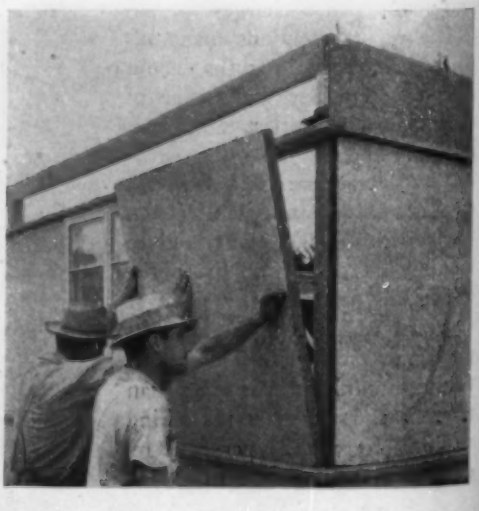
1942

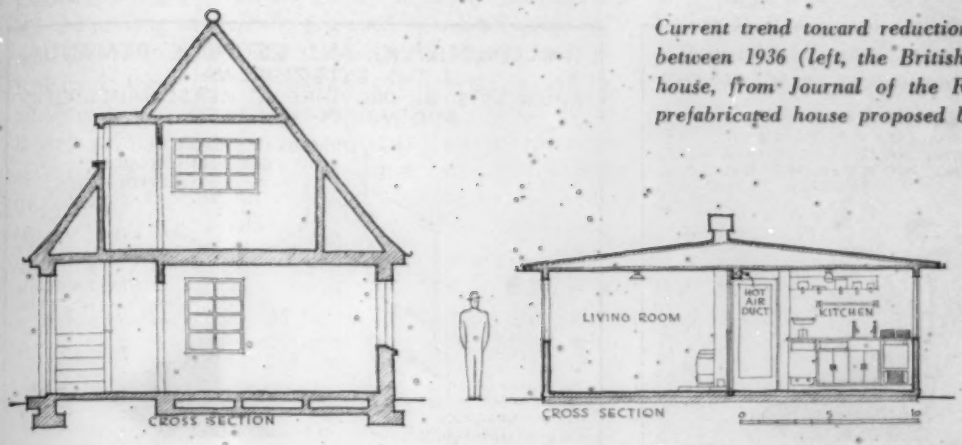


White there are major differences in the framing of the two houses, the principle of the skeleton frame is the same in both. The modern version is, of course, an engineered design. The upper one is the framing diagram of the Meggatt house, Wethersfield, Conn., from "Early Connecticut Houses," by Isham and Brown. The lower one is that of the Glenn Martin defense homes, designed by the Pierce Foundation and Skidmore, Owings & Merrill, architects. Celotex photograph



1710





Current trend toward reduction of building bulk in Britain between 1936 (left, the British Land Settlement Association house, from Journal of the R.I.B.A.) and 1944 (right, the prefabricated house proposed by British Ministry of Works)

and mass production; second, improvements in the standards of comfort; and third, a reduction in household effort and operational costs.

Efforts to Create Savings in Construction Costs Through Simplification

Beginning with the minimum house, a trend towards simplification of construction is indicated by the more frequent omission of foundation walls and roof rafters, with the subsequent elimination of cellars and attics. The experience with cellarless houses and flat roofs gained in war housing has been sufficiently extensive to show the resulting economies. Further simplification is indicated by the growing use of materials which serve multiple functions. This accomplishes a reduction in the number of materials used within walls and floors, and avoids the costly and time-consuming overlapping of operations by different trades. A study of examples reveals the following:

The Frame Wall. If we examine the development of the conventional frame house wall construction we find that during the last few years it has grown in complication due to the addition of insulation, vapor barriers, and devices for the prevention of plaster cracks, etc. More and more layers have been added to the wall as new needs became recognized. Each addition served a separate and distinct function. In the interest of economy it now becomes necessary to turn from complication to simplification. Newly developed products are available which serve more than one purpose, and consequently the number of layers within a wall or floor can be reduced.

The steps in the progress of simplification are illustrated in the accompanying drawings. Already a growing number of materials for them are on the market, chiefly the wallboards and plywoods in their improved and varied forms. Dry construction shows that simplification in one surface of the wall—in lathing and plastering—brings savings in other parts of the construction. So far the use of wallboards or plywoods has produced relatively little economy in comparison with plastering, but noticeable savings have come through substantial reductions in rough work and trim. The unusual plywoods and some of the wallboards which come with a finished wearing surface have decorative properties in themselves which save in painting.

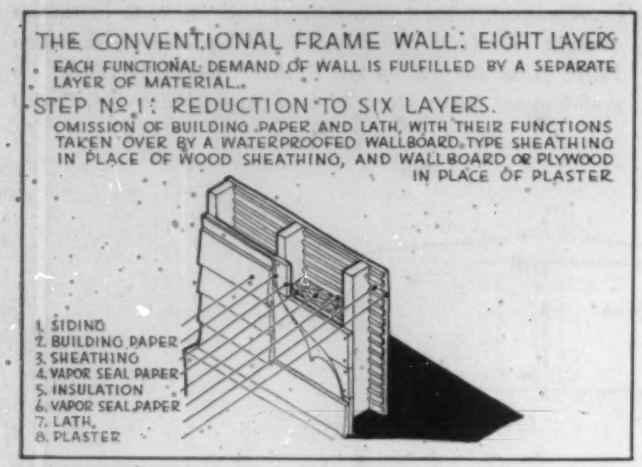
The Masonry Wall. The old-fashioned heavy masonry wall which for hundreds of years served so well in all types of construction was amazingly simple in comparison with the complicated present-day stud wall. One material acted as outer surface, core and inner surface. Through thickness and weight it gave ample structural support, prevented the penetration of cold and moisture, and provided good acoustical properties. Heavy masonry has been rendered obsolete by the high cost of labor and the clumsy qualities which interfere with today's need for flexible planning and design. The progress in masonry construction, primarily through the use of larger blocks, has produced many efficiencies. All masonry, however, demands site erection, is time consuming and does not allow the full harnessing of industrial production through which substantial savings can be made. Nevertheless, the cinder block houses built by the TVA at Norris proved to be cheaper than the frame structures. Anticipated postwar shortages in lumber will certainly bring a temporary increase in masonry construction.

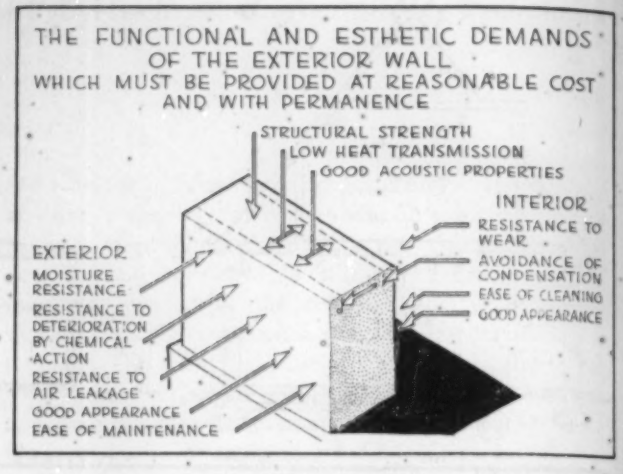
The Processed Wall. The need for an industrially produced wall material resulted in the development of the "processed wall." Robert L. Davison* carried on extensive research toward a material which contains all the properties demanded of an exterior wall and which at the same time is suitable for prefabricated houses. Various substances were mechanically "processed" to answer this requirement. The resulting curtain wall sections consist of only three layers. Processed wall panels are simply laminated by machines, in contrast to the shop assembled panels which are commonly used in prefabricated houses. They eliminate in their production the operations of fitting, nailing, puttying, etc., and do not require the assembly line.

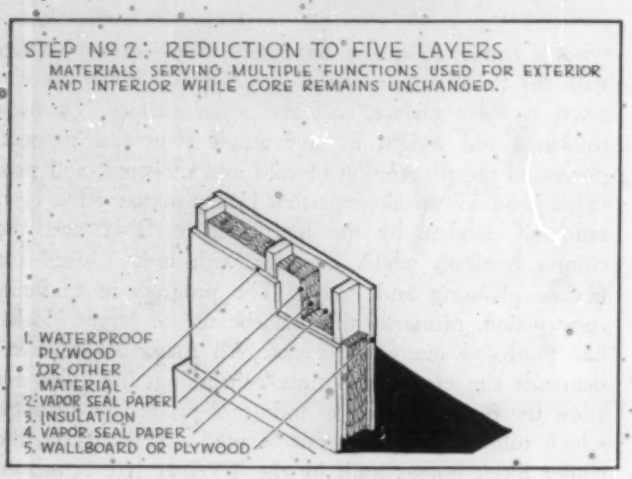
The principle of the "processed wall" is represented in a variety of materials which have already demonstrated their merit. Quantities of them have been used in recent industrial construction; among these are Cemesto board and cellular steel panels. The latter due to their great structural strength have been used in small house construction without a structural skeleton. In addition the hollow spaces avail themselves for the distribution of pipes and wires and can even be used as ducts for hot-air heating. They suggest the ultimate accomplishment in simplification; namely, to have one material serving all the functional demands of the wall while at the same time providing for the mechanical installations.

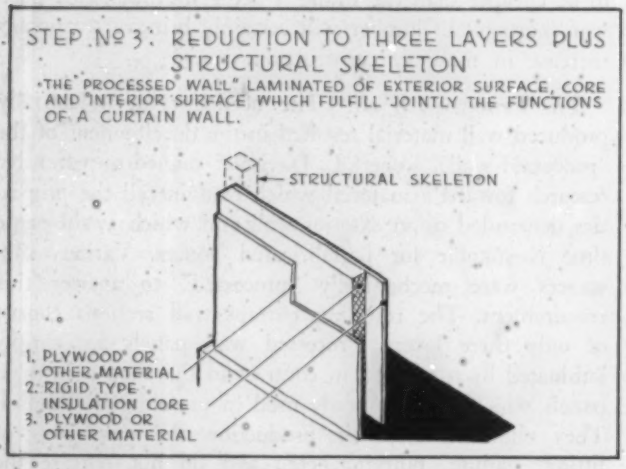
---

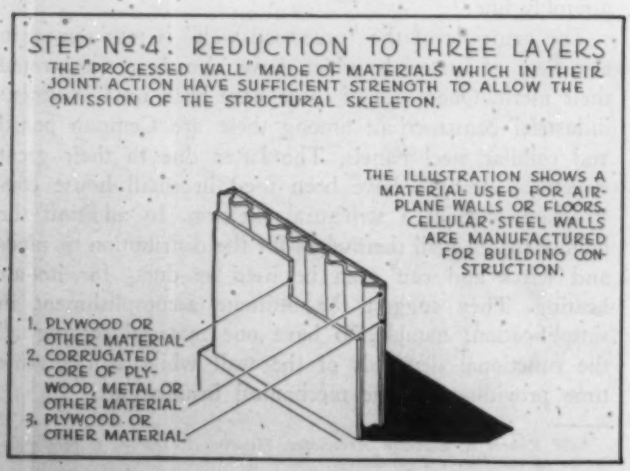
* *Of Robert L. Davison Associates, Housing Research, formerly Director of the Pierce Foundation.*


THE CONVENTIONAL FRAME WALL: EIGHT LAYERS
EACH FUNCTIONAL DEMAND OF WALL IS FULFILLED BY A SEPARATE LAYER OF MATERIAL.
STEP Nº 1: REDUCTION TO SIX LAYERS.
OMISSION OF BUILDING PAPER AND LATH, WITH THEIR FUNCTIONS TAKEN OVER BY A WATERPROOFED WALLBOARD TYPE SHEATHING IN PLACE OF WOOD SHEATHING, AND WALLBOARD OR PLYWOOD IN PLACE OF PLASTER
1. SIDING
2. BUILDING PAPER
3. SHEATHING
4. VAPOR SEAL PAPER
5. INSULATION
6. VAPOR SEAL PAPER
7. LATH
8. PLASTER




STEP Nº 2: REDUCTION TO FIVE LAYERS
MATERIALS SERVING MULTIPLE FUNCTIONS USED FOR EXTERIOR AND INTERIOR WHILE CORE REMAINS UNCHANGED.
1. WATERPROOF PLYWOOD OR OTHER MATERIAL
2. VAPOR SEAL PAPER
3. INSULATION
4. VAPOR SEAL PAPER
5. WALLBOARD OR PLYWOOD


STEP Nº 3: REDUCTION TO THREE LAYERS PLUS STRUCTURAL SKELETON
"THE PROCESSED WALL" LAMINATED OF EXTERIOR SURFACE, CORE AND INTERIOR SURFACE WHICH FULFILL JOINTLY THE FUNCTIONS OF A CURTAIN WALL.
STRUCTURAL SKELETON
1. PLYWOOD OR OTHER MATERIAL
2. RIGID TYPE INSULATION CORE
3. PLYWOOD OR OTHER MATERIAL


STEP Nº 4: REDUCTION TO THREE LAYERS
THE "PROCESSED WALL" MADE OF MATERIALS WHICH IN THEIR JOINT ACTION HAVE SUFFICIENT STRENGTH TO ALLOW THE OMISSION OF THE STRUCTURAL SKELETON.
THE ILLUSTRATION SHOWS A MATERIAL USED FOR AIRPLANE WALLS OR FLOORS. CELLULAR STEEL WALLS ARE MANUFACTURED FOR BUILDING CONSTRUCTION.
1. PLYWOOD OR OTHER MATERIAL
2. CORRUGATED CORE OF PLYWOOD, METAL OR OTHER MATERIAL
3. PLYWOOD OR OTHER MATERIAL

All of the essentials for a house wall (chart above) could still be supplied by the simplified walls suggested in the sections at the left. The sections are adapted from drawings supplied by Robert L. Davison Associates, Housing Research

The simplification process is also definitely expressed in the trend toward the "single wall" interior partitions, for which a number of manufacturers are offering materials.

Prefabrication

A remarkable growth in the prefabrication industry is evident in the United States as well as in England. The May, 1941 list of manufacturers of prefabricated houses of the U. S. Central Housing Committee was contained on six mimeographed pages. By February, 1942 this list had grown to twenty-seven pages. The FHA has examined more than 500 proposed methods of prefabrication and has accepted 232 as eligible for insured mortgage financing. The Federal Works Agency estimates that over 14,500 dwelling units were produced by factory prefabricators between July 1, 1940, and January 1, 1942. In England the Ministry of Works in May, 1944 announced plans for the manufacture of 200,000 to 250,000 factory-made demountable steel houses in two years at a peak rate of 20,000 a week.

Mass production of building parts is not only the keystone to the accomplishment of a reduction in the cost of house building; it also helps to solve the problem of supplying the unprecedented postwar demand for housing under the existing shortages in skilled building trades' workers. Foremost among all other available measures it will fulfill the nation's hope to bring new decent housing to a greater number of people.

Improvement in the Standards of Comfort

Following World War I the development of automatic heating had a tremendous effect on living comfort, and caused considerable innovations in the planning of houses. The automatic features brought to the house conveniences of living which formerly could only be found in luxury apartments with janitor service. The postwar developments in heating have been alluringly publicized. Certainly we shall find some new systems—for one example,

radiant heating—and many greatly improved specialties. We are moving toward the provision of a flexible control over the temperature and humidity in winter and in summer as well. A great many of the new things will be refinements suitable only for higher-priced houses. It is, however, gratifying to note that there is a decided evidence of a coming production of equipment which will save in operating expense, thereby compensating for the additional cost of the installation. Wartime fuel conservation has emphasized the value of double glazing, weather stripping and insulation. It has also been demonstrated that a very substantial saving in fuel grows out of the use of large windows, properly oriented to admit solar radiation.

Bathrooms and kitchens have for some time undergone such remarkable improvements that it has been said that modern architecture has entered the house through the back door. Many savings and technical advantages rest in the prefabricated one-piece bathroom. The attempts to produce whole kitchens with equal boldness are likely to add planning difficulties to the already existing trade problems. In the entire field of prefabrication there exist two schools of thought. One claims advantages for the complete factory-made house or unit—like the trailer-shipped TVA houses or the pre-assembled kitchen-bathroom units—while the other favors the sectionally site-assembled method.

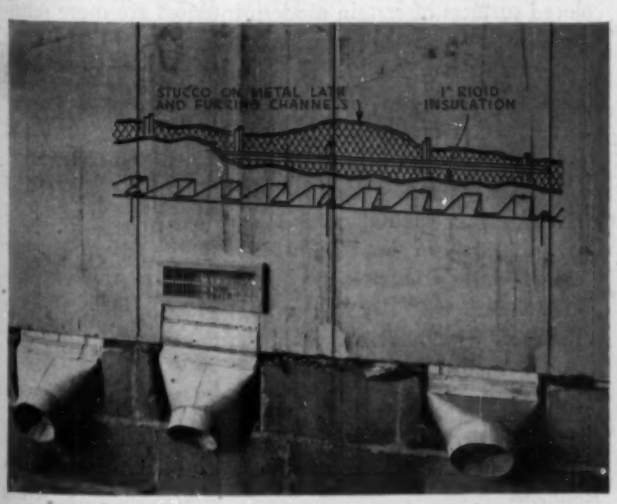
Acoustical considerations are a new influence on house design. Up to now noise reduction was left to the fabrics of the interior furnishings and minor details like silent switches. The thinner walls and floors resulting from economic necessities will demand special acoustic treatment to overcome the annoyances of sound penetration.

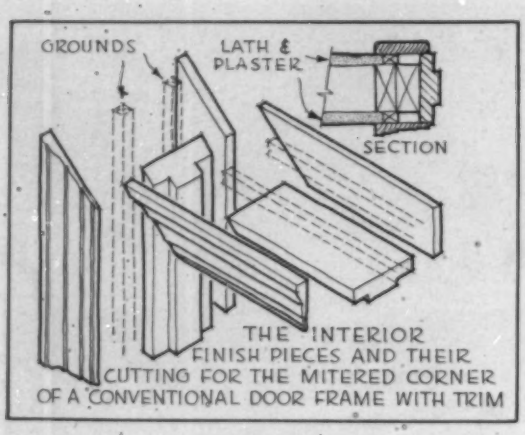
The great popular appeal for the numerous mechanical devices which add luxurious comforts to living complicates the problem of lowering building costs. The additional expense for the equipment will have to be borne by savings elsewhere. In part, efficiencies in construction and planning may contribute towards this aim, and a considerable portion of savings will have to come from a reduced operating expense. In addition, some extra expense will have to be borne as a consequence of the increase of the standard of living. What was formerly regarded as a luxury becomes a necessity.

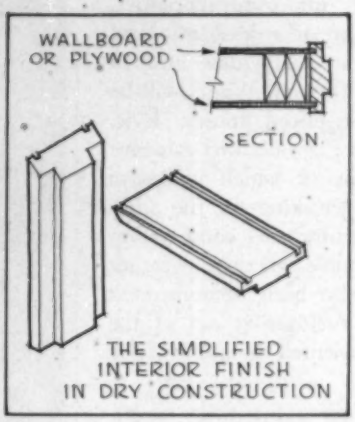
A practical example of an integrated wall material: a panel of Cemesto being applied to a wartime dormitory building

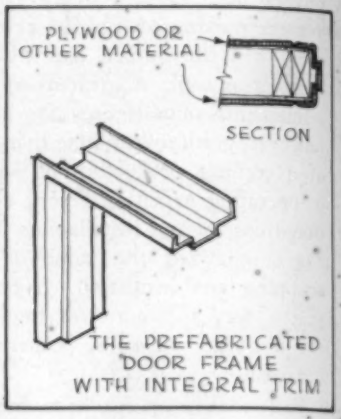
Robertson cellular steel wall panels, enclosing North American Aviation plant, Dallas. Gordon Turnbull, architect

Here the cellular steel panels are used for residence walls. Cell spaces serve as stacks for wiring; here, as heating ducts

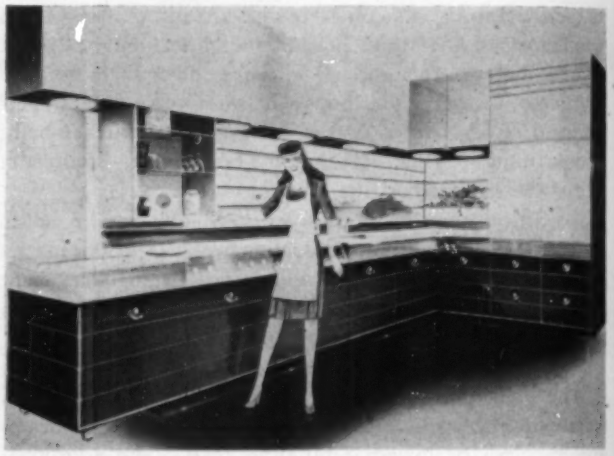



GROUNDS
LATH & PLASTER
SECTION
THE INTERIOR FINISH PIECES AND THEIR CUTTING FOR THE MITERED CORNER OF A CONVENTIONAL DOOR FRAME WITH TRIM

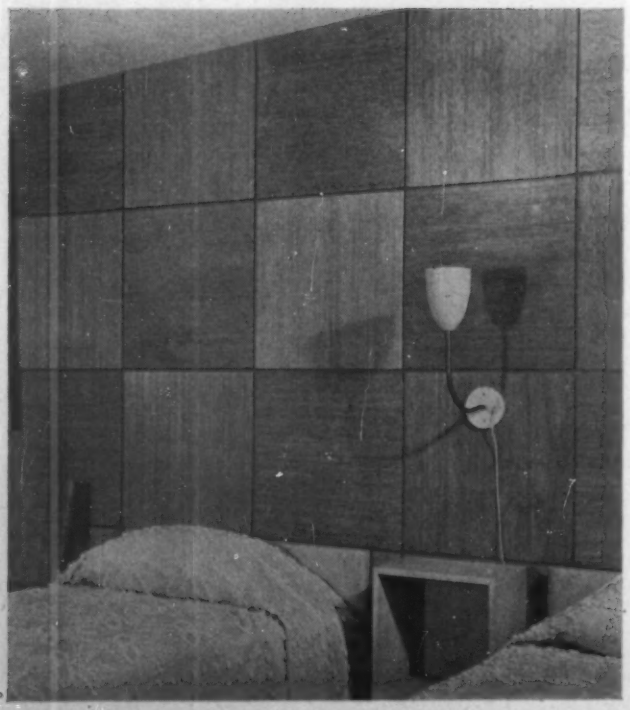




Along with the simplification of the wall itself goes the simplification of the trim



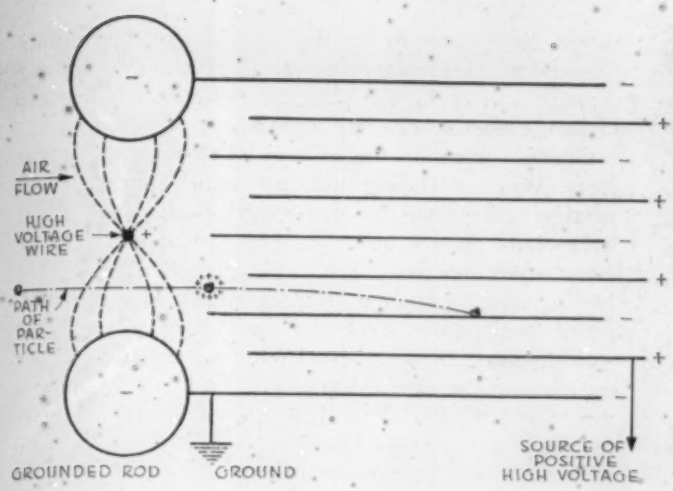
Left: Kitchens have reached high efficiency with integrated equipment and cabinet units (General Electric photo). Right: further integration and standardization are proposed for postwar, as per this suggestion of Allegheny Ludlum Steel Corp.



Reduction in Housework and Operating Cost

The principal reduction in household effort results from efficient planning and convenient storage equipment. Aside from these, the ease of cleaning and maintenance is a major factor. For the latter the type of materials used is of influence. It is evident that the soft and delicately colored surfaces of certain modern interiors are more sensitive to wear than the dark and artificially aged finishes of the traditional rooms. However, there are new paint products, plastics and textured materials on the market or in the process of development which are made to stand up better and age better under normal domestic wear. With these materials the continuous expense for repair and redecorating is reduced. A large part of the dust and dirt problem can be eliminated through improved air cleaners and proper kitchen fans which remove the greasy fumes that have been largely responsible for the soiling of windows and coating the surfaces with oily films.

Striated plywood (United States Plywood photo), one of many materials for simplifying wall construction and maintenance. Residence of Amos Peaslee, designed by Vincent J. Kling



The electrostatic air cleaner (Precipitron) is being prepared for the home; photograph shows an experimental household model. Dust particles coming between grounded rods (diagram above) and high voltage wires, pick up a positive charge, pass on to dust collector, are attracted to and held by the negative plates

Summary

It is hopeful to note that the inventiveness and opportunity to experiment has provided the building industry with the techniques to produce relatively cheaper and better houses. In spite of many problems which exert a restraining influence, mass production is gaining in employment in house building. A fixed standard of durability is the practical limit to which house construction can be pared down. In the public interest this standard must be kept high. Many of the new materials and methods do not fulfill this demand. As long as no intelligible official rating and no impartial experience exchange exist, the use of new materials or methods is retarded. The new things must prove their merits in competition with established methods and systems. The architect has the obligation of keeping abreast of new techniques and materials, so that he may take advantage of such as do establish their merits or economies.

PART III. *The Direction in Progress for Design*

The main issue on which progress in design for the postwar period centers is the problem of producing better living conditions at less cost. The shape of the roof, the type of mouldings or ornamentation, or other matters of style are purely secondary factors. Architectural design for medium and low-priced housing is simply a matter of making the most of the buildings and the land that belongs to them under the prevailing conditions. Its objective is the enrichment of the life of the families through the new houses or dwellings created for them.

Enhancing the Livability of the Buildings

A trend toward volume production in smaller houses has been pointed to. Mindful of this condition, the designer is now confronted with the task of increasing the comfort and convenience of living in spite of the reduced building size. The solution is aided by progress in design, construction and new mechanical equipment which have overcome the inefficiencies of the conventional houses. Both in space utilization and in other features which lead to the enjoyment of the house, progress in architecture has indicated many new opportunities for better design. They grow from the principles of flexible planning and the approach to design from the "inside out."

Toward making the small house larger they offer these three measures: first, to increase space use through "open planning"; second, to enlarge the space conception through inclusion of the outdoor areas as visual parts of the interior; third, to devise a multiple function for rooms.

These three factors, if honestly put at the basis of design, will have a profound effect on the character and appearance of houses. That they will be applied grows from their practical value in making houses more livable and expansive. The following describes and illustrates them.

Open Planning

In the "open plan" several rooms are combined within one space. As independent dining rooms, living rooms and dens could be shrunk no further in the process of reducing the building bulk, they were fused by the elimination of the separating walls. Out of this combination arises savings in building cost, also a greater ease of operation.

In the "open plan" only the rooms within the zone of the building used for daytime activities can be combined. This pertains to the living room, dining room,

library or den. A trend toward the gradual inclusion of the kitchen now also emerges. The latter is made possible by better equipment, the simplification of the processes involved in the preparation of food and the washing of dishes.

Great subtleties are demanded for the design of an "open planned" living space. The portions devoted to different functions must remain well articulated to allow their simultaneous function and to permit, if desired, their visual separation through screens, curtains, etc. "Open planning" is also helpful in the elimination of space wasted often in halls, corridors, vestibules and stairways. In compact houses and apartments the living space itself is used as a distributing point for the access to the bedrooms with adjoining bathroom, and kitchen and dining area.

The Enlarged Space Conception

A trend to increase the size of the glass area has come to the small house design from an ever-growing number of examples of modern architecture. These large glass surfaces have been tested for a sufficient period of time and under an adequate variety of circumstances to prove their value, and to create a technique for the solution of the new problems they present. Aside from the benefits of solar radiation, the increased daylight greatly enhances the room. From a practical point of view alone, small traditional windows become utterly senseless* when it is recognized that the average light they give is usually much less than 6 foot-candles, while for ordinary reading or sewing 10 to 20 foot-candles are recognized as the minimum under artificial illumination. The shut-in feeling associated with the traditional windows disappears through the entry into view of the landscape; besides, the garden is brought into the design scheme for year-round enjoyment and the entire lot functions in daily living.

Multi-Function Rooms

A multi-function room differentiates itself from the "open plan" space by providing for different uses of the same area at different times. It commonly occurred when laundries and kitchens were combined, or when the guest room was used as study or sewing room, or when the dining room became available as an extra bedroom. Now a great variety of other multi-purpose rooms suggest themselves, even in the service area.

Building Form and Detail

There appears a movement toward greater standardization of house plans and a trend toward single-story small houses as outgrowths of the simplified building techniques and the increasing uniformity of space demands. Though compact buildings, two rooms in thickness, are the popular type, houses of a single span offer many advantages. What they lose from being longer and narrower through an increase in the exposed wall surfaces they gain in sunshine, ventilation, and the better incorporation of the garden area. In the extreme standardization required for prefabricated houses there exists nevertheless the opportunity for the expression of individuality through the treatment of the grounds and interiors and through variety in the placing of accessory units like carports, porches, dividing screens, etc.

Opinion differs on the question of sloping versus level roofs. While a sloping roof has some undeniable advantages aside from its deep-rooted public appeal, war houses have proved efficiencies through elimination of the extra rafters required for it. The attic space may justify itself if used for storage, trusses or ducts. However, bedrooms mutilated in their form by sloping roofs, lighted and ventilated by complicated dormers, are an expensive sacrifice for the sake of habit and tradition. In spite of the unattractiveness of much of the temporary war housing there are enough good examples of modern architecture to show advantages for the flat roof on both the aesthetic and the practical side; such roofs allow for a simple incorporation of overhangs which protect rooms against the high summer sun and guard windows against the entry of rain.

Enhancing the Use and Enjoyment of the Grounds

The land has been hitherto an unclaimed asset to the design of the house. By planning the lot in harmony with the building, the entire property can be brought into use and enjoyment. Gardens can extend the living zones of the house into the out-of-doors, while service yards and drives can provide necessary outside utility spaces for kitchen, laundry and garage. For a visual separation and privacy from neighbors, planting and trellis can be used. Such an approach to design is of particular value to one-story houses where bedrooms are at ground level.

The design of house and ground as an entity also overcomes the shortcomings of the conventional suburban site plans, namely, the deficiency in privacy between the houses, the ugly backyard, and the view of the street as principal outlook from the living room. A trend toward the utilization of this greatly enlarged space conception is in evidence. We find it not only in California houses, where the weather favors the use of the out-of-doors, but also in colder climates where the enjoyment of the out-of-doors for a part of the year is only visual.

The growing development of large tracts of land for housing permits improvements over the conventional relation of buildings to each other and to the unsafe and dusty streets. Besides, the entity of building and ground can be designed for integration into the neighborhood.

In Conclusion

While it has been stated officially that progress in design has been lagging, it is a fact that the acceptance of progress rather than design progress itself has been delayed. The new architecture demanded by the new conditions confronting building has been held back by the confusion resulting from placing the secondary considerations of the formalistic expression of style ahead of the primary objectives of the new design concept. Once it is recognized that these principal aims of the new architecture are directed toward increasing the livability of the house without increasing cost, and under full cognizance of all the influence of change, design progress will be accomplished. The better yet cheaper house will come into existence in a way that will increase the enjoyment of living to a greater number of people.

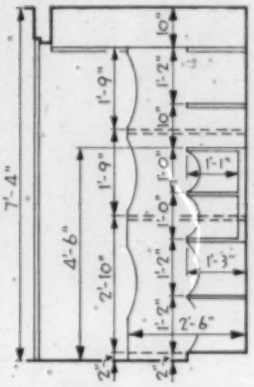
---

* *"With common roller shades cutting off an average of 60 per cent of daylight, fly screens 50 per cent and drapes and curtains 75 per cent, it is a small wonder that windows sometimes function only as a means of decoration rather than for daylight." (W. C. Randall and A. J. Martin, 24th Annual Convention of the Illuminating Engineering Society, 1930)*

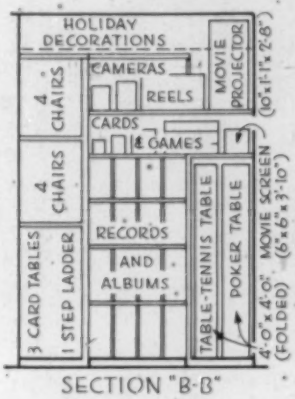
HOUSEHOLD CLOSETS, PART IV

Miscellaneous Closets • ***Research by Larch Renshaw, A.I.A.***

TIME-SAVER STANDARDS
DECEMBER 1944

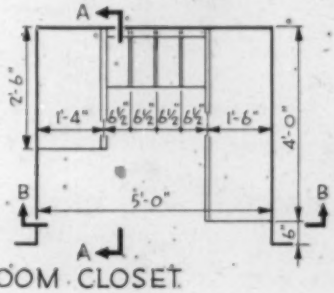


SECTION "A-A"



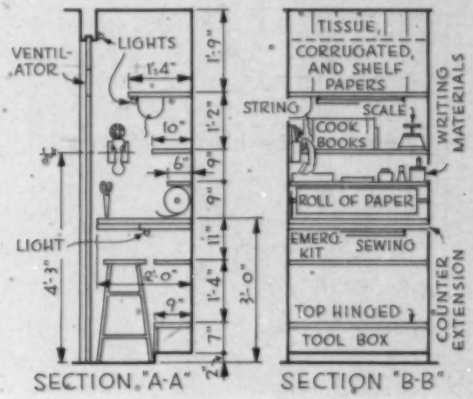
SECTION "B-B"

NOTE - SPACE GIVEN TO TABLE TENNIS & POKER TABLES COULD BE DIVIDED TO TAKE A VIOLONCELLO OR OTHER MUSICAL INSTRUMENTS.



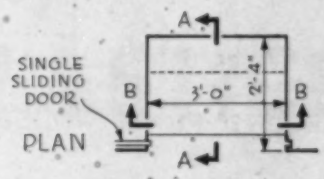
PLAN

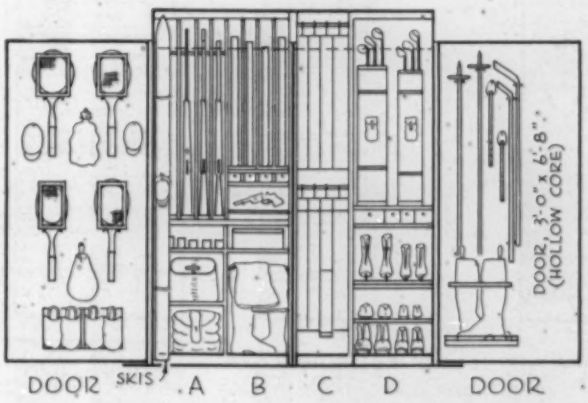
LIVING ROOM CLOSET



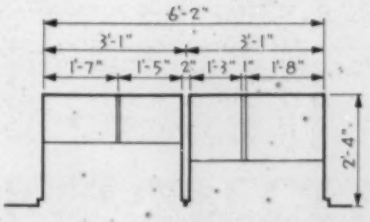
SECTION "A-A" SECTION "B-B"

HOUSEKEEPER'S DESK-CLOSET

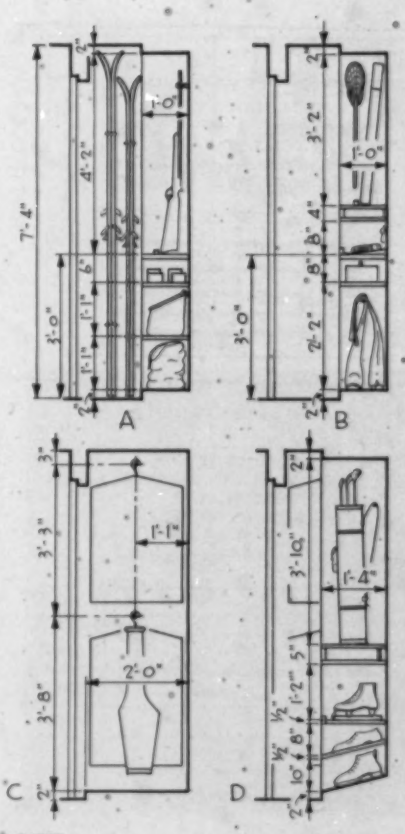




TENNIS RACKETS, BALLS, CAPS, AND SHOES. GUNS, SHELLS, FISHING BASKET, KNAPSACK. RODS, FLIES, PISTOLS, TACKLE, BOOTS. SPORT CLOTHES GOLF CLUBS, BALLS, TEES, ETC. SKATES, SNEAKERS, SKI BOOTS. SKI POLES, RIDING CROPS, AND BOOTS, HOCKEY STICKS.



PLAN



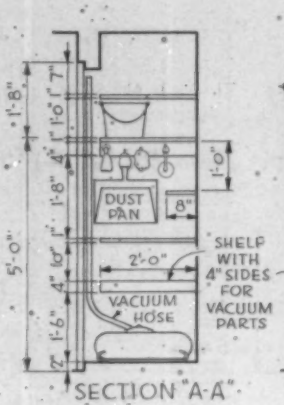
SPORTS EQUIPMENT CLOSET

(SCALE OF ALL DIAGRAMS ON THIS PAGE ¼"=1'-0")

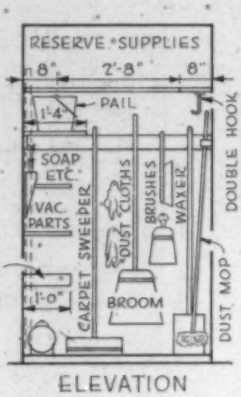
ARCHITECTURAL RECORD
TIME-SAVER STANDARDS
DECEMBER 1944

HOUSEHOLD CLOSETS, PART IV

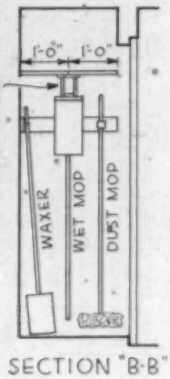
Miscellaneous Closets (continued)



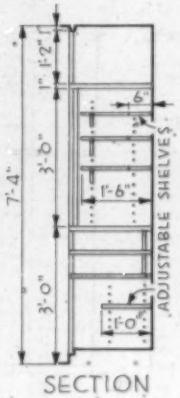
SECTION "A-A"



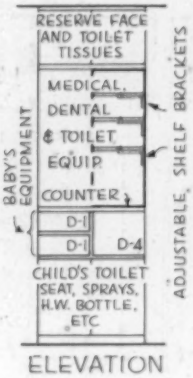
ELEVATION



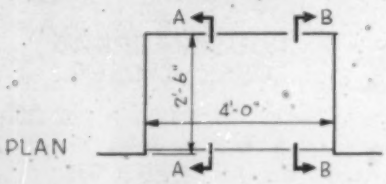
SECTION "B-B"



SECTION

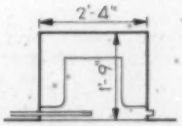


ELEVATION



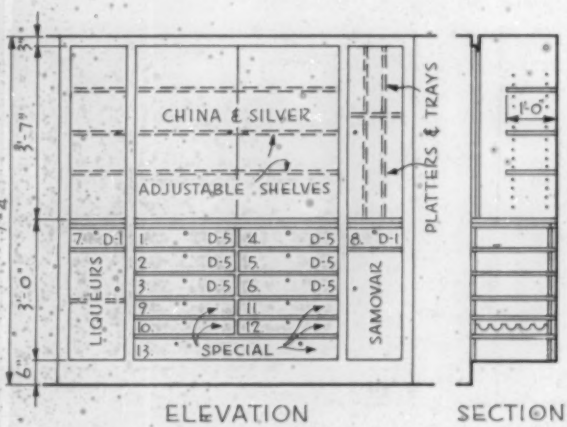
PLAN

SECOND FLOOR HOUSEHOLD APPLIANCES



PLAN

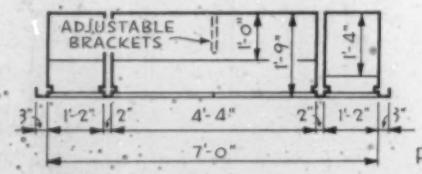
BATHROOM & MEDICINE



ELEVATION

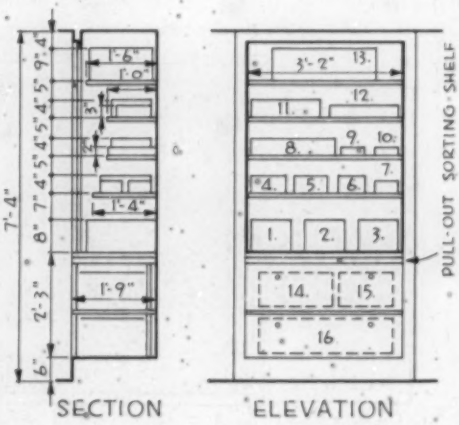
SECTION

1, 4, 7, 8. FLAT SILVER
2, 3, 5, 6. NAPKINS, TABLE CLOTHS, DOILIES, ETC.
9, 11. PLACE MATS (SHALLOW)
10, 12. SPECIAL LINEN ROLLERS
13. EXTENSION LEAVES.



PLAN

DINING ROOM STORAGE

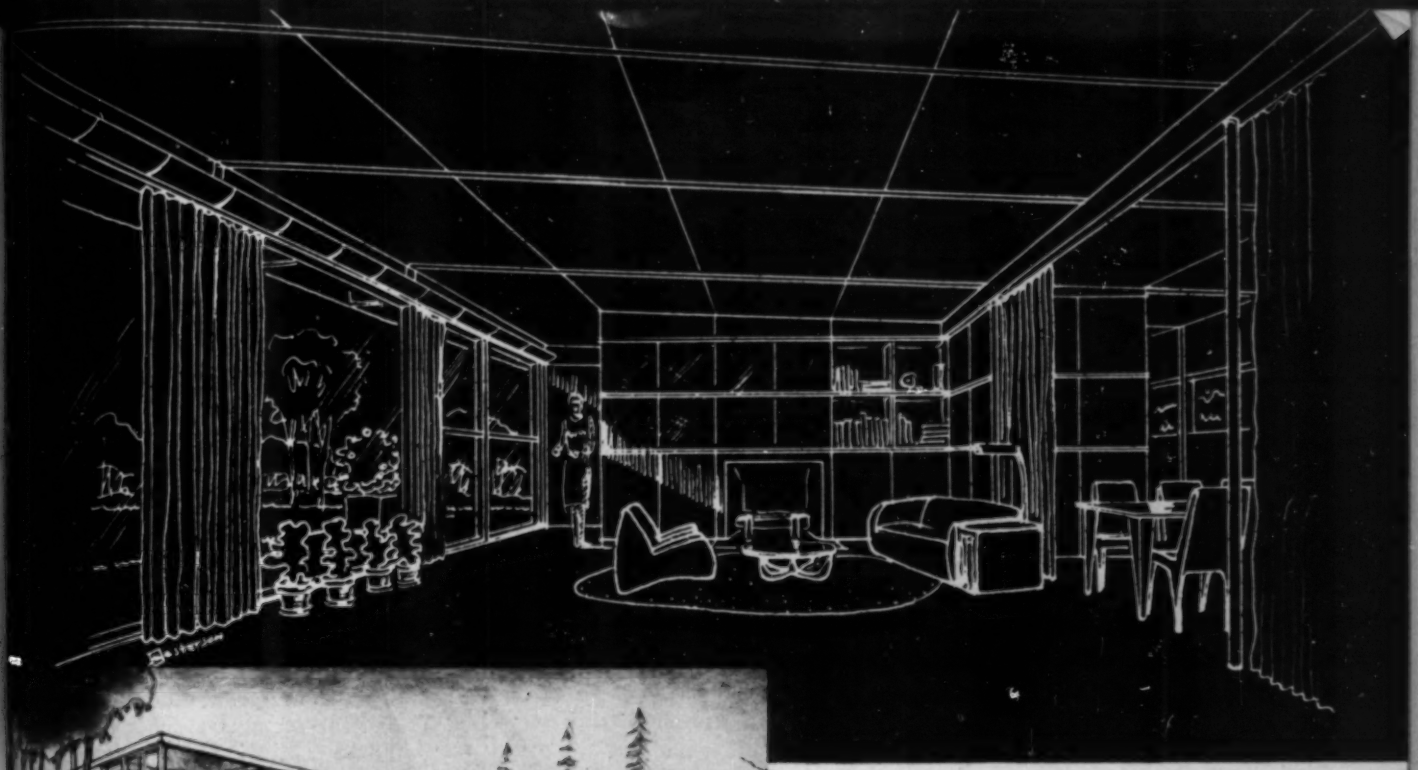


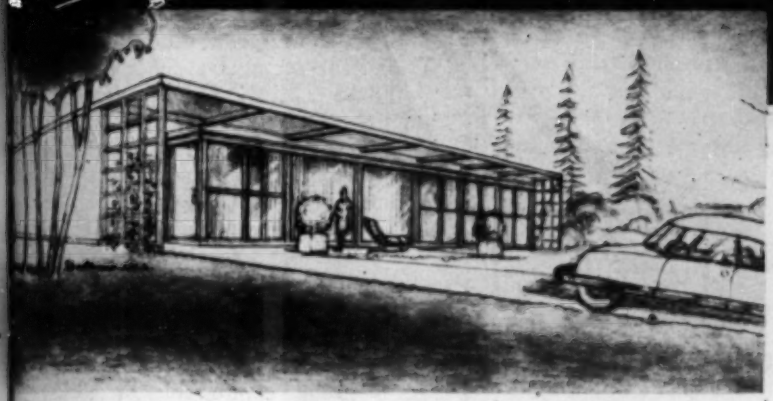
SECTION ELEVATION

1. 8 SHEETS (10" x 18" x 8" high)
2. " " " " " "
3. 8 REG. TURKISH TOWELS (10" x 16" x 8" high)
4. 8 REG. PILLOW CASES (9½" x 14" x 4" high)
5. " " " " " " " "
6. 12 REG. HAND TOWELS (7" x 14" x 4" high)
7. 12 REG. WASH CLOTHS (2 PILES) (6" x 6" x 3" h.)
8. 4 REG. BATH MATS (22" x 10" x 4" high)
9. 12 SMALL HAND TOWELS (6" x 12" x 2" high)
10. " " " " " " " "
11. 4 BLANKET COVERS (18" x 10" x 4" high)
12. 2 SHOWER CURTAINS (18" x 9" x 3" high)
13. 2 PILLOWS (26" 17" x 9" high)
14. 4 SUMMER BLANKETS (20" x 13" x 8" high)
15. 2 MATTRESS COVERS (14" x 18" x 8" high)
16. 3 WINTER BLANKETS (34" x 18" x 9" high)

BED & BATH LINEN

(SCALE OF ALL DIAGRAMS ON THIS PAGE ¼" = 1'-0")





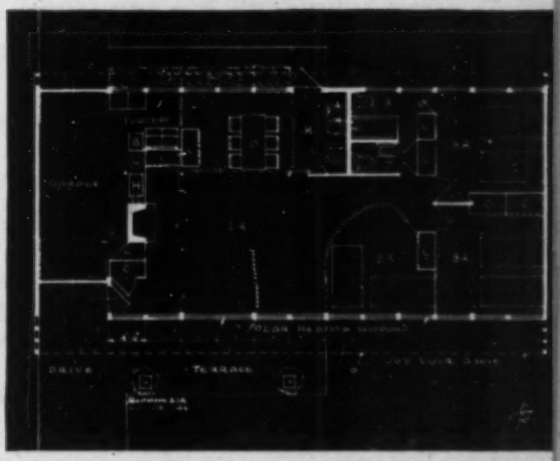
PLASTICS IN HOMES

The following list suggests the possible applications of G-E plastics in homes:

WALL SURFACING AND DOOR MATERIALS • PARTITIONS • FURNITURE MATERIAL • HARDWARE • LIGHTING FIXTURES • ELECTRICAL SUPPLIES AND PANEL BOARDS • BATHROOM FIXTURES AND SPECIAL PARTS

The General Electric Company offers architects, designers and engineers the service of its plastics technicians. These experienced men can give you technical advice and information on the use of all plastics materials—laminates, compression, injection and extrusion molded, low pressure and cold molded. The General Electric Company molds and fabricates all compounds that are on the market today and because of this is not limited to one particular material or manufacturing process. For further information write Section C-295, One Plastics Ave., Pittsfield, Mass.

Hear the General Electric radio programs; "The G-E All Girl Orchestra Sunday 10 P.M. EWT, NBC. "The World Today" news every weekday 6:45 P.M. EWT, CBS.



FIFTY YEARS IN THE PLASTICS INDUSTRY

GENERAL ELECTRIC

PD-295

INSURE YOUR FUTURE BY BUYING WAR BONDS AND SAVING THEM

REQUIRED READING

NEW ARCHITECTURE AND CITY PLANNING

A Symposium. Paul Zucker, ed. New York (15 E. 40th St.), Philosophical Library, 1944. 6⅞ by 9¼ in. xv + 694 pp. illus. $10.00.

A book of this size and scope, contributed to by so many acknowledged authorities in the field, is sure to be of exceptionally wide interest. Its thoroughness and simple style, moreover, should recommend it especially to the student and embryo architect.

Divided into sections on specific building types, new materials and construction methods, housing, city and regional planning, etc., it covers the entire field. The only thing left out—and a curious omission it is—is an index, without which the vast amount of information included in the text is swallowed up and lost when you want to refer to it again.

Interesting as it is to read of what Louis Kahn thinks of industrial architecture, what Richard Neutra has to say on schools, or Lorimer Rich on hospitals, the most useful part of the book for the experienced architect is likely to be the second section, on new materials and new construction methods.

Take Robert L. Davison's chapter on "When Science Takes Over the Home," for example. Presented in pseudo scientific style, it includes a discussion of the house as "a variety of large refrigerator"—a conception with which in these fuel-scarce days we are apt to agree rather promptly. Of course Mr. Davison is referring not to cold houses, but to warm bodies—not to house heating, but to body cooling. In other words, here is a treatise on that frequently misunderstood subject, convection heating and radiation. Mr. Davison has done a fine job of exposition, of sorting out of ideas, and of simplifying in general. Since his main purpose is clarification, however, he might well have taken as his starting point the fact that "air at 72° Fahrenheit is cooler than the body at 98° Fahrenheit," rather than plunging into the middle of his subject as he has done. Everyone knows that the normal body temperature is 98.6° F., and that a room temperature of 80° is uncomfortably warm, but many a reader will find it pure Greek that "the dwelling keeps people comfortable by cooling them."

Another timely chapter is Harold Sandbank's "Outline Summary of Prefabrication Methods." Starting with Buckminster Fuller's Dymaxion House and carrying through other experiments, Mr. Sandbank gives a complete, albeit brief, digest of developments in prefabrication to date.

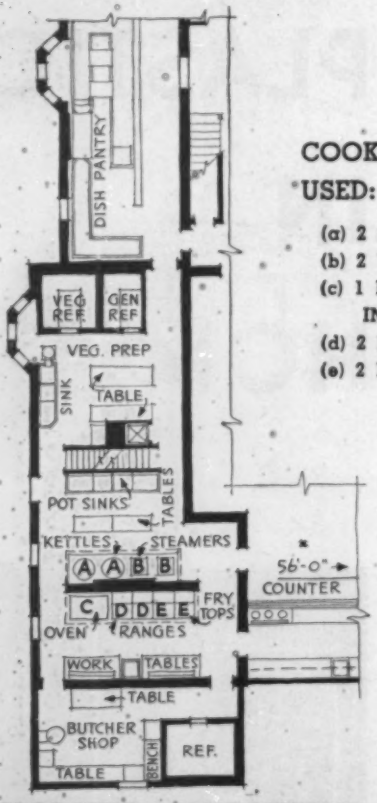
Thomas Holden's discussion of new materials and methods is another chapter worth special mention. Mr. Holden clearly is of the opinion that the new developments in this line are not being put to their fullest use. "I have a strong feeling," he says, "that most houses being built currently in accordance with traditional ideas are esthetically sterile, examples of a rubberstamp school of design." It seems unlikely, he concludes, "that you and I can either wish or argue a new architecture into being. Nor, apparently, does a wealth of new resources of itself generate a new form of artistic expression. It would seem strange, though, that a nation which can outproduce the world to win a global war, a nation which has newly learned its strength and its capacity . . . that such a nation will continue long to prefer houses which celebrate, architecturally, grandfather's limitations and grandmother's inhibitions. . . . It isn't a question of whether little windowpanes look pretty from

(Continued on page 122)

KITCHEN PLAN NO. 18: Eighteenth of a series of successful mass-feeding kitchen plans.

How to feed several hundred Navy students in a mess hall added to an old fraternity house was solved with this layout—without structural changes.

KEEP FOR HANDY REFERENCE!



COOKING EQUIPMENT USED:

(a) 2 Stock kettles
(b) 2 Vegetable steamers
(c) 1 No. 959 BLODGETT GAS-FIRED BAKING AND ROASTING OVEN
(d) 2 Hot-top ranges
(e) 2 Fry tops

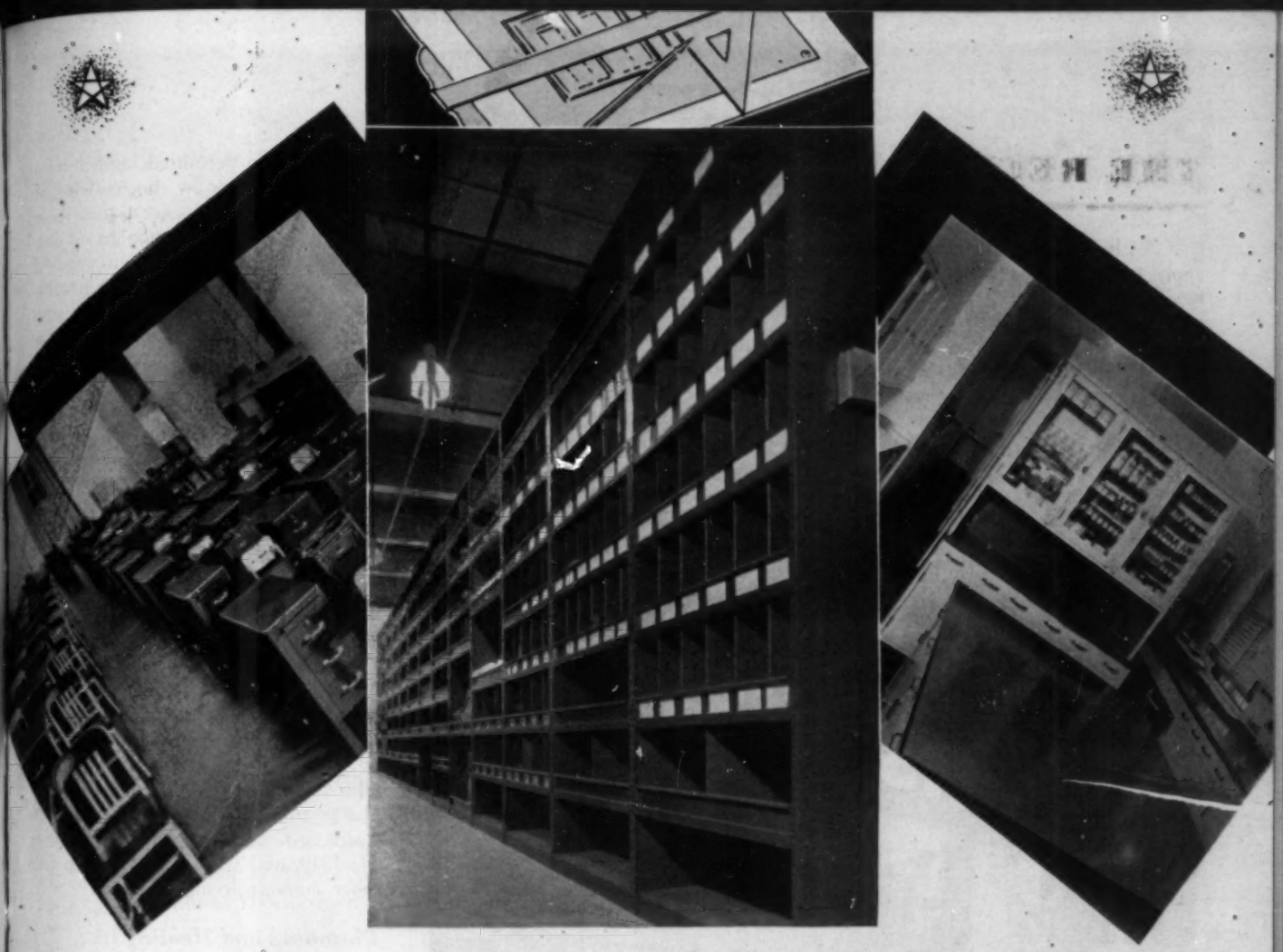
Designed by:
Lacy and Atherton, Inc., Architects and Engineers, Wilkes-Barre, Pa.
Consultant, H. P. Rung, Nathan Straus-Duparquet, Inc., New York, N. Y.

Space restrictions are taken in stride by the NO. 959 BLODGETT COMBINATION BAKING AND ROASTING OVEN used in this installation. Two 7"-high and one 12"-high compartments in two sections provide 27 square feet of shelf area in 16.6 square feet of floor space, accommodating six sheet pans, 36 pies, or 600 lbs. of meat at each load. For details and specifications of Blodgett Ovens, consult your equipment house or write

The G. S. BLODGETT CO., Inc.

53 Maple Street **Burlington, Vt.**

Reprints of this new series will soon be available to architects on request.



Dreams Into Realities

DESIGNER to a new-world-trend in modernization and metalization . . . the architect is acutely conscious of opportunity and responsibility to do something about making the postwar world a better place in which to live. With greater work than ever before challenging his capacity . . . attuned to wider markets for his service . . . the architect is keenly sensitive to new standards.

Good materials . . . skilled craftsmen . . . modern techniques . . . cannot alone provide America with the buildings adequate to house Business, Industry and Institutions in the design for better living.

The architect . . . artistic by nature . . . practical by profession . . . must be the focal point in the better construction job that lies ahead.

With a background of rich experience in the development of metal furniture . . . we shall again build Desks, Tables, Filing Cabinets and other equipment items for offices . . . equipment for hotels, hospitals, libraries and institutions . . . steamships, railroads and public buildings . . . that will be in keeping with architectural development in the translation of *dreams into realities.*

GF

THE GENERAL FIREPROOFING CO.
YOUNGSTOWN 1, OHIO
U. S. A.

THE GENERAL FIREPROOFING COMPANY • *Youngstown 1, Ohio*

METAL DESKS • ALUMINUM CHAIRS • METAL FILING CABINETS • STEEL SHELVING • FILING SUPPLIES • SAFES • STORAGE CABINETS

THE RECORD REPORTS (Continued from page 14)

U-1 (Utilities). They do not, however, apply to housing construction authorized by the NHA. Such housing is subject to Limited Preference Rating Order P-55-c, and not to Schedule A of CMP Regulation 6.

The amended schedule permits builders to use the following materials or products formerly prohibited or restricted: steel plate, aluminum, metal lath, certain building components such as hardware, plumbing and heating items, and certain other items manufactured from steel sheet or strip, or from copper.

The requirement that structural steel and reinforced concrete buildings be designed in accordance with WPB Directives 8 and 9 has been eliminated to conform with the revocation of these directives on October 4, 1944.

Restrictions on the use of lumber for building construction have been simplified. The requirement that builders obtain permitted lumber from local wood lots or by the resawing of larger, less critical sizes, has been eliminated. Former restrictions on electrical installations have been changed to a single prohibition against installation of wire and conduit of larger sizes than the minimum required by the 1940 National Electric Code.

Copies of Schedule A as amended are available at all WPB district offices and should be consulted by builders holding a Form GA-1456 authorization.

Priorities for Veterans

Procedures authorizing immediate priorities assistance to discharged veterans of the present war for building or remodeling their homes have been announced by the WPB and the NHA.

Under the new procedures, applications may be approved for the construction, alteration or betterment of houses to be owned and occupied by veterans who have received an honorable discharge from the Army, Navy, Marine Corps or Coast Guard since December 31, 1940, and who are unable to find other suitable living quarters.

Plumbing and Heating Equipment

The WPB has announced items of plumbing and heating equipment included in the list of civilian items for which a supplemental allotment of 58,428 tons of steel has been made available for the fourth quarter. These are: all domestic cooking and heating stoves; warm air furnaces; oil and gas floor and wall furnaces; warm air distribution equipment; underfired gas water heaters; hot water storage tanks; range boilers; low pressure steam and hot water heating specialties; combustion, heat generation and distribution controls.

Manufacturers of any of this equipment who desire to obtain material under this allotment must file supplemental CMP 4B applications with the WPB Plumbing and Heating Division. The manufacturers are urged to request material only in those amounts that they can produce without interfering with manpower and facilities for war production.

Preparation for Reconversion

Special assistance in obtaining materials and components in preparation for reconversion was urged at recent meetings of the Domestic Mechanical Refrigerator and Domestic Laundry Equipment Labor Advisory Committees, WPB reports.

Committee members urged WPB to permit refrigerator and laundry equip-

(Continued on page 110)

It's *Scientifically Processed* for Toughness and Durability!

YOU use reenforcing to give concrete strength. And to give SISALKRAFT its strength, sisal fibre reenforcing is used.

The closely spaced fibres are at right angles to each other, embedded in two layers of asphalt and sealed, under heat and pressure, between two sheets of kraft paper, to make a tear-resistant, weatherproof covering of unmatched dependability.

SISALKRAFT Resists Tearing
Costs Less to Apply!

No batten strips are needed with SISALKRAFT. Large headed roofing nails hold it in place. An unbroken "blanket" of SISALKRAFT protects sheathing and wood framework, shuts out wind, dirt and moisture. Specify SISALKRAFT over sheathing — as flashing around all window and door openings — under floors and roofing — as a vapor barrier over the inner side of studs before lath is applied.

Specify time-tested SISALKRAFT. *Its unmatched performance has been proved for 25 years.*

THE SISALKRAFT CO.
205 W. WACKER DRIVE · CHICAGO 6, ILL.
NEW YORK · SAN FRANCISCO · LONDON · SYDNEY

Manufacturers of SISALKRAFT, FIBREEN, SISAL-X, SISALTAPE AND COPPER-ARMORED SISALKRAFT

SEND NOW...

for these technical data sheets on THERMOPANE ...prepared by DON GRAF

For your convenience, we have asked Don Graf, Technical Editor of Pencil Points, to prepare these easy-to-use technical data sheets on Thermopane. Because Thermopane provides a solution to the problem of reducing heat loss, this material will help you design and install larger glass areas in modern buildings.

Thermopane... the windowpane that insulates

Thermopane consists of two or more panes of glass, separated by an insulating air space. This space is hermetically-sealed at the factory with a patented metal-to-glass bond—the Bondermetic Seal. This bonds the panes into a single unit to prevent dirt or moisture from entering the air space. Thermopane fits into a modified single sash, just like a single pane of regular glass—stays there the year 'round.

Send for these sheets NOW

And get your name on our mailing list to receive technical data sheets on other Libbey-Owens-Ford Glass Products as they are prepared from time to time. Just mail the coupon below.

FREE

L O F **LIBBEY • OWENS • FORD**
a Great Name in **GLASS**

Libbey-Owens-Ford Glass Company
10124 Nicholas Building
Toledo 3, Ohio

Please send me the new technical data sheets on Thermopane and put my name on your list for similar sheets, as they become available, on other L•O•F Glass Products.

Name _____

Address _____

 (Continued from page 108)

ment manufacturers to place orders and receive raw material and components well in advance of final assembly so that employment may be maintained at a high level when war orders are cut back after V-E Day. Members of both committees advocated gradual relaxation, not complete abolition, of WPB controls after V-E Day, and urged also that government-owned plants be converted to civilian production only after the reconversion of privately-owned plants.

NHA NOTES

Action for Housing

Cities should start moving now to clear the ground for a broad attack on their housing problems in the postwar era, NHA Administrator John B. Blandford, Jr., told the annual convention of the American Municipal Association in Chicago recently.

Housing holds a central place in almost all plans for building a better and more productive America after the war, Mr. Blandford declared in putting forward a program of "action for housing." Such a program, he stressed, is fundamentally one to be carried out by cities with only supplementary federal help to the extent that cities "need it and want it."

As one job which cities can do immediately, Mr. Blandford pointed to modernization of building codes and re-examination of zoning ordinances. Many building codes are obsolete, he said, and would act as a dead-weight on postwar home building.

Higher Ceilings

Construction of larger and better quality housing will be made possible in congested areas through the establishment of higher sales and rental ceilings, WPB and NHA have announced.

Top sales prices of $8,000 and shelter rental ceilings of $65 will be established in selected high cost areas, with lower ceilings in other areas where such lower levels will allow construction of the quality and size necessary to attain objectives of the program. The housing will be authorized under what is known as the H-2 program and all occupancy restrictions will be removed on such housing.

Construction authorizations will be subject to local quotas to be determined by the NHA and these local quotas will set maximum sales and rental prices. The NHA also must approve sales prices and rentals for each project as a condition to the extension of priorities for materials.

The new ceiling prices, together with the relaxation on the use of materials recently announced by the WPB and the NHA, now enable builders to construct houses approximating prewar standards, and will make possible erection of three bedroom houses which could not be built under previous price ceilings in most areas.

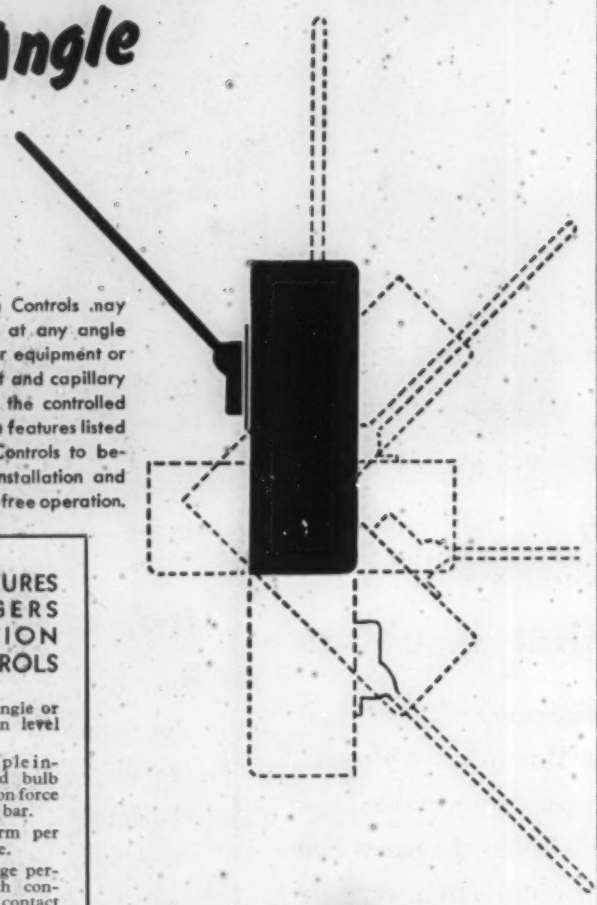
Materials Supply

Supplies of building materials and equipment will probably at least keep step with actual demands for supplies of residential construction during the immediate postwar period, according to a survey of housing industry reconversion prospects by the Technical Division of the NHA.

Various parts of the materials and equipment industry will require from six weeks to seven months to reconvert to a peacetime basis, the survey indicated, but this tempo should present no serious time differential as compared with the probable rate of expansion in residential construction.

(Continued on page 112)

You Can Mount WR Controls At Any Angle



White-Rodgers Hydraulic-Action Controls may be mounted in any position or at any angle convenient to the design of your equipment or installation. The flexible element and capillary may be bent or adjusted to fit the controlled area. These advantages plus the features listed below enable White-Rodgers Controls to become an integral part of any installation and assure years of accurate, trouble-free operation.

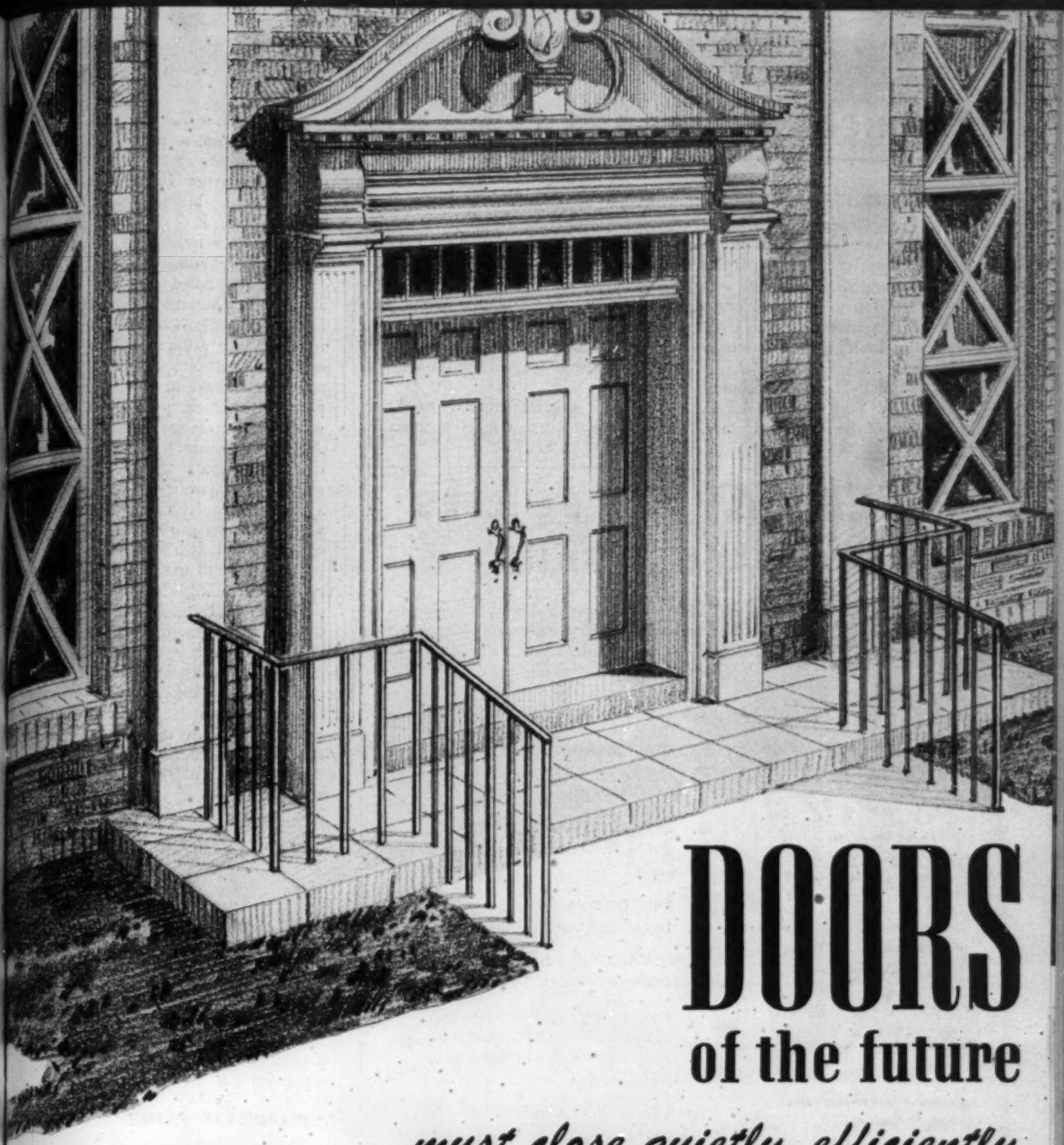
8 EXCLUSIVE FEATURES OF WHITE-RODGERS HYDRAULIC-ACTION TEMPERATURE CONTROLS

1. May be mounted at any angle or position, above, below or on level with control point.
2. Hydraulic-Action Principle incorporating solid-liquid filled bulb and capillary provides expansion force comparable to that of a metal bar.
3. Diaphragm motion uniform per degree of temperature change.
4. Power of solid-liquid charge permits unusually sturdy switch construction resulting in positive contact closure.
5. Heavier, longer-wearing parts are possible because of unlimited power.
6. Dials are evenly and accurately calibrated over their entire range because of straight-line expansion.
7. Controls with remote bulb and capillary are not sensitive to change in room temperature. Accuracy of control is not affected by temperature changes in surrounding area.
8. Not affected by atmospheric pressure. Works accurately at sea level or in the stratosphere without compensation or adjustment.

WHITE-RODGERS ELECTRIC CO.

1202M Cass Ave. St. Louis, Mo.

Controls for Refrigeration • Heating • Air-Conditioning

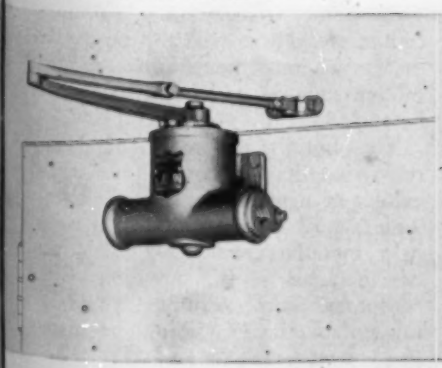


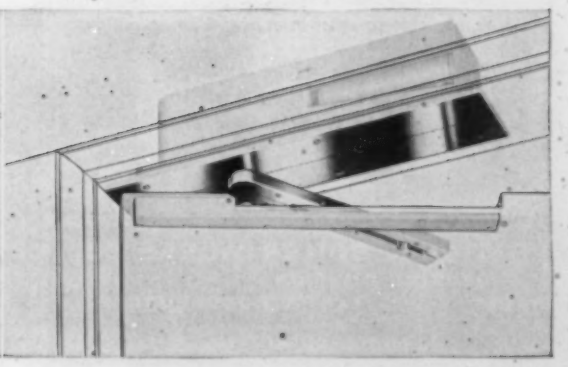
DOORS
of the future

...must close quietly, efficiently

Design and mechanism of LCN Door Closers will set the standard for the future, as they have in the past.

Copyright 1944, Norton Lasier Co.





LCN

DOOR CLOSERS

NORTON LASIER COMPANY, 466 W. SUPERIOR ST., CHICAGO

 (Continued from page 110)

PLASTICS MEET ARCHITECTS

"Plastics in the Building Field" was the subject of a recent forum in which architects and experts from the plastics industry exchanged questions and answers in an effort to define the ways in which plastics may serve the huge postwar home building and construction program.

Sponsored jointly by the Technical Committee, New York Chapter, A.I.A., and the Society of the Plastics Industry, Inc., the forum was held at the Waldorf-Astoria, New York, on November 12, immediately preceding the two-day fall conference of the S.P.I.

In order to be thoroughly realistic and practical about plastics applications and markets, the architects and plastics experts asked each other such pertinent questions they seemed almost impertinent!

Plastics experts wanted to know more about current costs of installed materials with which they would have to compete on a price basis. They asked questions about the practicality of various types of applications of plastics in the building field, such as wall finishes, floor finishes, prefabricated stairs, or treads and risers, pipes and tubing, insulation, etc.

Architects asked for information about the characteristics of various kinds of plastics, and their suitability for particular purposes. They wanted assurances that plastics would perform, and sought ways of specifying proper plastics for each purpose so clients would be protected. They inquired about establishing standards and tests that would make the specification of plastics a scientific certainty. Frank answers indicated that architects and plastics experts can and should work continuously together to improve building products for the benefit of all concerned, including the public.

Presiding officers at the forum were George K. Scribner, president of the S.P.I., and Arthur Holden, president of the New York Chapter of the A.I.A. Among the speakers were Howard Vermilya, formerly technical director, FHA, and present director of the John B. Pierce Foundation; Kenneth K. Stowell, editor of the ARCHITECTURAL RECORD; and Charles A. Breskin, editor and publisher of "Modern Plastics."

A. Gordon Lorimer, Donald Graf, Harold Sleeper, Simon Breines and Leopold Arnaud formed the Architects' Panel. Members of the Plastics' Panel were: George Clark, Formica Insulation Co.; J. B. Lincoln, Virignia Lincoln Corp.; George R. Meyercord, Haskelite Mfg. Co.; J. R. Price, Thermoplastic Division, Bakelite Corp.; Ted Swedlow, Swedlow Aeroplastics Corp.; Millard Demarest, Celanese Celluloid Corp.; W. C. Goggin, Dow Chemical Co.

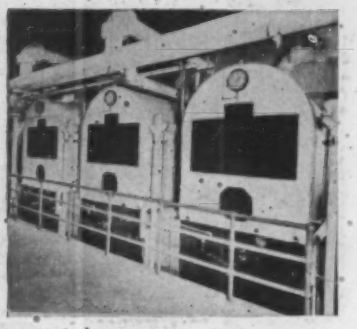
"PRODUCTS FAIR"

Macy's department store, New York City, is now making plans for an extensive "Postwar Products Fair" to be held early in 1945. Over 50,000 sq. ft. of space on the fifth floor will be devoted to the show, with the exhibit area divided into various classifications —the home, transportation, communication, etc. There will also be a small theater where demonstrations, lectures, motion pictures and other events will be staged.

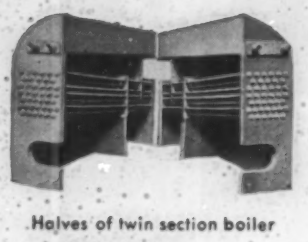
The fair is the result of Macy's conviction that a dramatic educational exhibit of new products would have a wide appeal to the public, and would help manufacturers bring their new developments to the attention of the consumer. Store executives would like to contact those wishing to discuss

(Continued on page 114)

"FUEL-SAVER" BOILERS AVAILABLE AGAIN



Typical Type C Installation.



Halves of twin section boiler ready for bolting.

Type KD knocked-down for shipment.

FOR years "Fuel-Saver" Boilers Type C have met the requirements for low cost heating in office and apartment buildings, hotels, schools, theatres, industrial plants, etc.

Their design and construction makes them especially suitable for post-war heating requirements:

QUICK STEAMING
Due to rapid and positive internal water circulation.

MAXIMUM HEAT ABSORPTION
Due to effective distribution of heated gases.

EASE OF CLEANING
Due to accessibility of heating surfaces.

"FUEL-SAVER" Boilers have cut fuel costs in thousands of heating installations.

Complete range of standard sizes rated in accordance with S. H. B. I.—15 lb. A. S. M. E. standard — for hand, stoker, oil or gas firing.

Type C twin section—a heating boiler in halves. For installation where Type C one piece cannot be carried through existing passages.

Type KD—knocked down—a heating boiler designed for shipment so that sections can be carried through a door or window. Eliminates expensive cutting or patching of building. Reduces time out when in need of steam.

Every International Representative is a competent boiler man able to assist in solving heating problems.

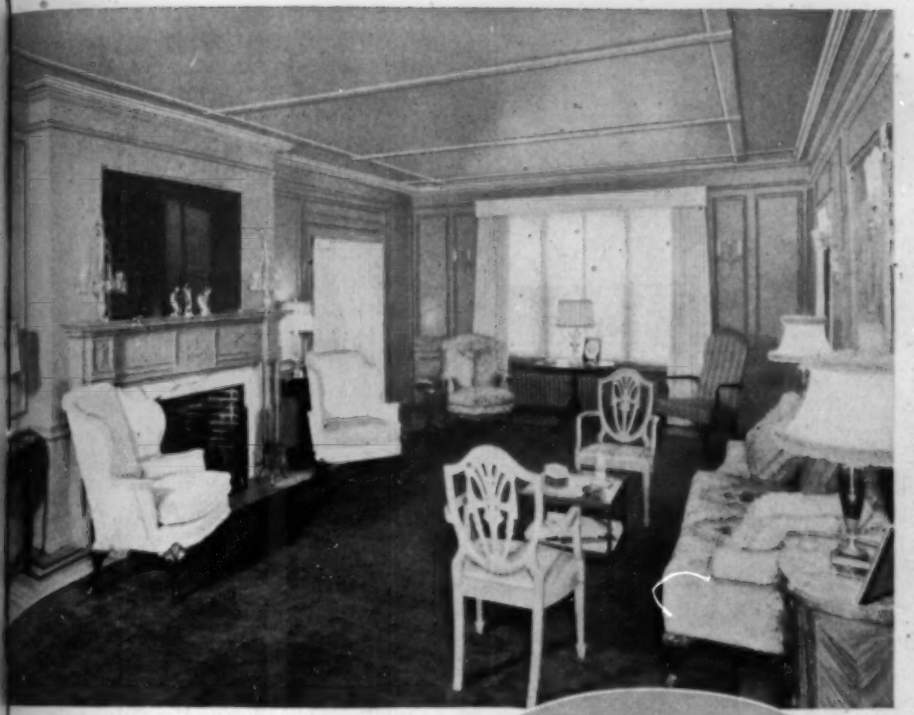
Write for bulletin describing Type C and Type KD boilers. See Sweet's Architectural File.

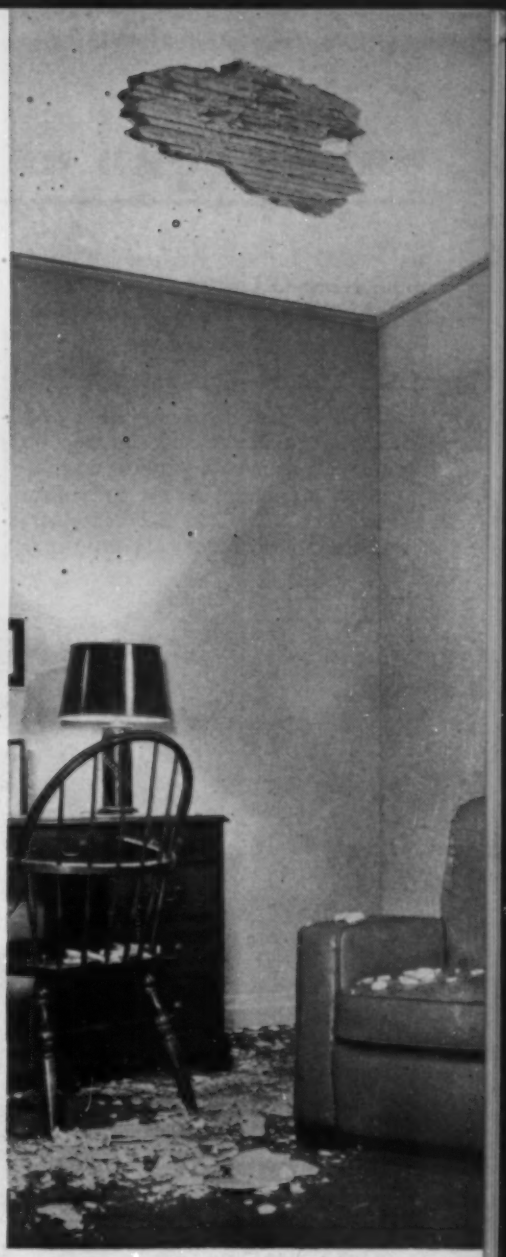
Boiler Builders for 58 Years

THE INTERNATIONAL BOILER WORKS CO.
HEATING DIVISION
300 BIRCH STREET · EAST STROUDSBURG, PA.

HEATING BOILERS TYPES C, KD, DD, K
POWER BOILERS TYPES CR, FR, LFR, LFS

How an Architect Could Handle a Job Like This!





THE 1940 CENSUS revealed 18% of all dwelling units in need of major repairs. That figure is now estimated to be around 30%. Much of it is represented by long neglected cracked ceilings.

You may be called upon soon for recommendations to solve the cracked plaster problem. For homeowners, bothered with cracking plaster, want ceilings of enduring beauty and permanence.

Using Upson Ceiling Panels and Upson Shad-O-Line Mouldings made specifically for the purpose, a contractor under your direction can apply a ceiling which will remain forever crackproof—a ceiling which will be more than a bare, uninteresting expanse. He can apply a ceiling which you have designed to become an integral part of the decorative scheme—adding modern character and charm to the interior.

Beauty in keeping with the most pretentious homes—yet at a cost within reach of the small home owner. Upson Ceiling in the home of Fred Ludwig, President, Merritt Lumber Yards, Reading, Pa.

A contractor can do the job right over old plaster—without the dirt and muss which goes with replastering. And he can do it in a few hours.

The use of Upson Panels affords wide opportunity for improved ceiling design, both conventional and modern. Because of their crackproof qualities, Upson ceilings provide a permanent solution to the problem of cracking plaster. Write for details. The Upson Co., Lockport, N. Y.

Upson Quality Products Are Easily Identified by The Famous Blue-Center

UPSON

CRACKPROOF CEILINGS OF ENDURING BEAUTY

the matter further. Address all communications to Bert Bacharach, Director of Exhibit, Macy's, Herald Square, New York 1, N. Y.

ARCHITECTS WANTED

Architects familiar with soft drink bottling plant design and construction are in great demand, according to John J. Riley, secretary of the American Bottlers of Carbonated Beverages, national trade association of the soft drink industry. An industry-wide survey just completed, he said, reveals that an estimated 2,000 bottling plants will be constructed during the years immediately following the war. Sites have been purchased in many instances, and important quantities of bottling machinery have been ordered for delivery as rapidly as manufacturers can convert from war production.

"Each week we receive several letters from bottlers asking us to send them the names of architects familiar with bottling plant design," Mr. Riley reports. "We are adding to our present reference lists of architects, and will welcome correspondence with architects and engineers interested in becoming identified with our industry's postwar building program. Letters should be addressed to the American Bottlers of Carbonated Beverages, 1128 Sixteenth St., Washington, D. C."

PRINCETON LIBRARY

The firm of R. B. O'Connor and W. H. Kilham, Jr., of New York City has been appointed as architects of the $3,500,000 library which Princeton University will construct after the war.

Dr. Harold W. Dodds, president of the University, terms the new building "the capstone of Princeton's educational structure," and says that it is unique in concept among college libraries. By providing offices and study rooms for the various departments adjacent to the bookstacks, the library will bring student and faculty members together on a common ground, Dr. Dodds said, and will become "the workshop of the campus."

NEW OFFICES

Offices Opened

Sebastian J. Tauriello, A.I.A., A.D.I., has opened a new office in the Jackson Building, 220 Delaware Ave., Buffalo 2, N. Y., for the practice of architecture, interior and industrial design, project planning and product development.

Charles A. Pearson, Jr., A.I.A., has opened an office for the practice of architecture, city planning and industrial design, at Radford, Va.

Joseph T. Bellew has established a Customer Relations Analyst-Consultant Service, with offices at 90 State St., Albany, N. Y.

J. E. Axeman and W. S. Anderson, Jr., have announced the organization of a new company, Axeman-Anderson Associates, 233 West St., Williamsport, Pa. For the present the company will devote its entire time to research work for the anthracite industry, in the development of heating equipment using the new basic principle of burning anthracite as recently announced by the Anthracite Industries, Inc. (see ARCHITECTURAL RECORD, Sept., 1944, p. 44).

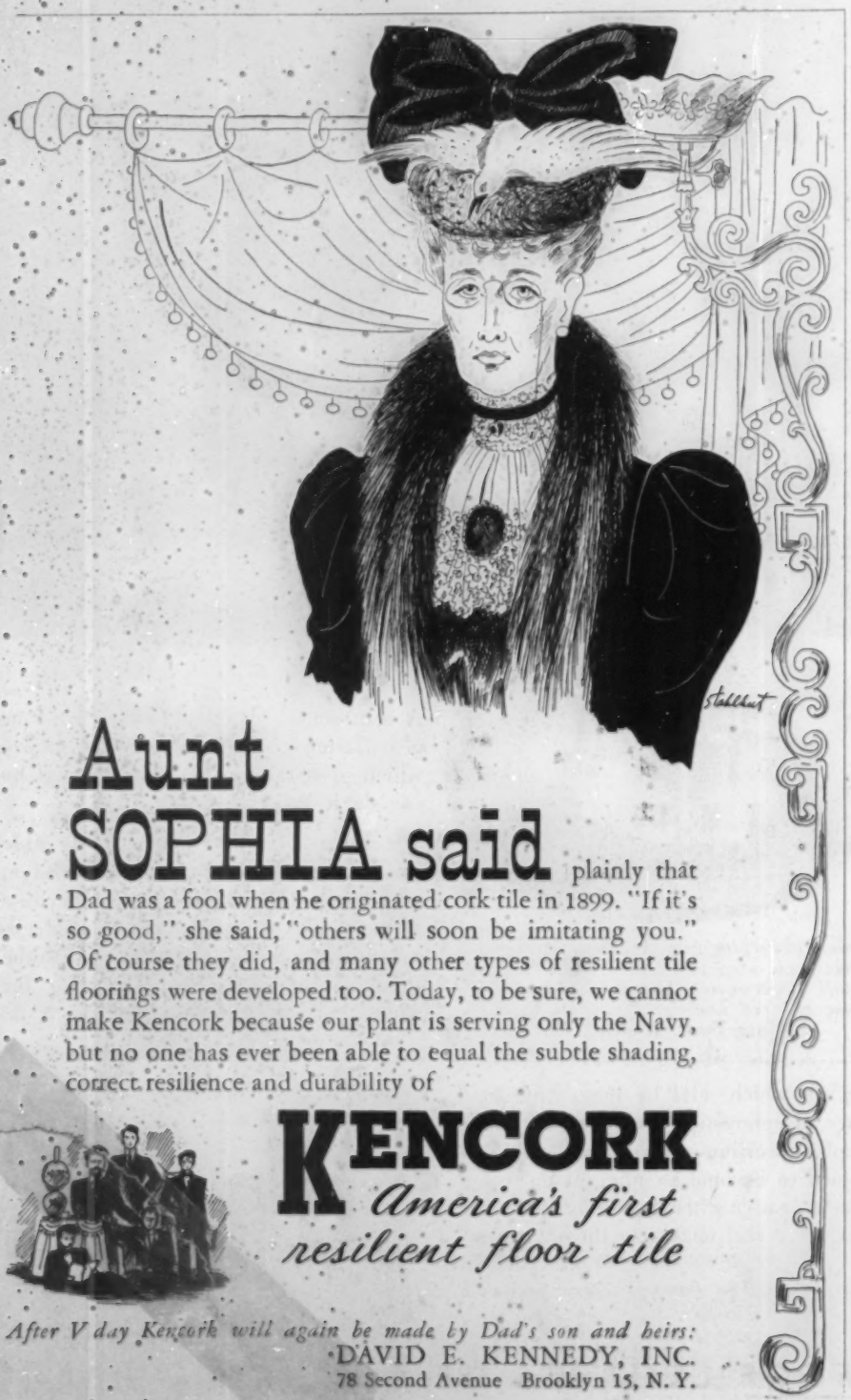
Offices Reopened

The following architects have announced reopening of their offices:

Bernard J. DeVries, A.I.A., 613 Hackley Union Bank Bldg., Muskegon, Mich.

Howard G. Elwell, A.I.A., 1520 Wil-

(Continued on page 116)


Aunt
SOPHIA said
plainly that Dad was a fool when he originated cork tile in 1899. "If it's so good," she said, "others will soon be imitating you." Of course they did, and many other types of resilient tile floorings were developed too. Today, to be sure, we cannot make Kencork because our plant is serving only the Navy, but no one has ever been able to equal the subtle shading, correct resilience and durability of
KENCORK
America's first resilient floor tile
After V day Kencork will again be made by Dad's son and heirs:
DAVID E. KENNEDY, INC.
78 Second Avenue Brooklyn 15, N. Y.

We know the answer to this one . . .

If sometimes tenants complain about not enough heat . . . If other times they're annoyed at too much heat . . . If your fuel bill has shown a decided increase . . . there's only one answer: Your heating system needs *control.*

A Webster automatically-controlled Steam Heating System will assure even heat in every room, regardless of exposure or outside temperature. No overheating . . . No underheating . . . No costly waste of rationed fuel.

In the Webster Moderator System, there are just four control elements—an Outdoor Thermostat, a Main Steam Control Valve, a Manual Variator and a Pressure Control Cabinet. These controls are an integral part of the Webster System—assuring the highest expression of comfort and economy in modern steam heating.

The Webster Outdoor Thermostat automatically changes heating rate when outdoor temperature changes.

More Heat with Less Fuel

Actual surveys made by Webster Engineers show that seven out of ten large buildings in America (many less than ten years old) can get up to 33 per cent more heat out of the fuel consumed.

We'll let you be the judge . . . Send for our free booklet "Performance Facts", and read case studies of 268 modern steam heating installations in commercial and institutional buildings. Shows savings in dollars and cents. Can we help you? Address Dept. **AR-12.**

WARREN WEBSTER & COMPANY, Camden, N. J.
Pioneers of the Vacuum System of Steam Heating : : Est. 1888
Representatives in principal U. S. Cities : : Darling Bros., Ltd., Montreal, Canada

Fuel-Saving Starts With CONTROL

AUTOMATIC **Webster** Steam Heating

THE RECORD REPORTS (Continued from page 114)

shire Blvd., Los Angeles 14, Cal.

Laurence M. Loeb, 99 Mamaroneck Ave., White Plains, N. Y.

New Addresses

The following new addresses have been announced:

Peter Copeland, architect and industrial designer, 745 Fifth Ave., New York 22, N. Y.

George F. Root, 3rd, architect, 101 Park Ave., New York, N. Y.

The Horsley Co., Inc., prefabricated structures, 205 E. 42nd St., New York 17, N. Y.

Firm Changes

Clarence O. Peterson and Wendell R. Spackman announce their association for the general practice of architecture, with offices at 604 Mission St., San Francisco 5, Cal.

Ben Schlanger and Maurice D. Sornik announce the formation of a partnership for the practice of architecture, with offices at 595 Madison Ave., New York 22, N. Y.

Walter A. Bowe has joined the staff of Walter Dorwin Teague, industrial designer, 444 Madison Ave., New York, as an associate in industrial planning and consultant.

Archer W. Richards has been appointed vice president in charge of contracts, Designers for Industry, Inc., Cleveland, Ohio.

Richard V. Trusdell has joined the firm of McStay Jackson, Inc., 840 N. Michigan, Chicago, Ill., as head of the designing department.

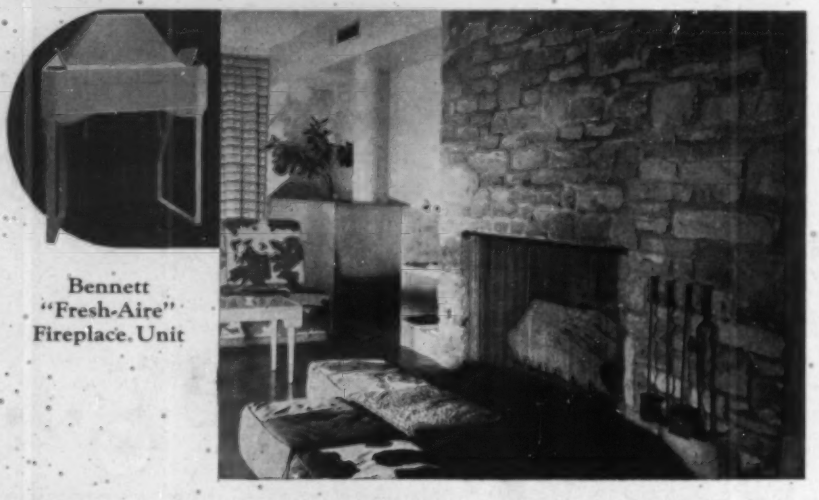
The architectural partnership of Janssen and Cocken has been dissolved as of December, 1939. Since that time the practice has been conducted by, and after November, 1944, will be continued under the name of William York Cocken, Architect. Address, Century Bldg., Pittsburgh, Pa.

The firm of R. H. Hunt Co., Architects, composed of B. F. Hunt and T. G. Street, has been dissolved. Mr. Hunt will continue the practice of architecture under the name of B. F. Hunt Associates, Architects, with offices in the James Bldg., Chattanooga, Tenn.

Donald M. Drake, president and principal owner, announces that the name of his building construction firm has been changed to the Donald M. Drake Co. Formerly known as Drake, Wyman and Voss, Inc., the firm will continue its offices at 904 Lewis Bldg., Portland, Ore.

Cornelius E. Burkey, formerly division manager of A. W. Hecker Co., has been appointed chief engineer of Designers for Industry, Inc., Cleveland.

(Continued on page 118)



Bennett "Fresh-Aire" Fireplace Unit

You Design its Beauty . . .

We Engineer its Function

When you design a fireplace to be built around a Bennett *"Fresh-Aire"* Unit, you have unlimited freedom to detail its appearance exactly as you want it. At the same time you assure correct *internal* construction.

When burning, a fireplace exhausts more than 200 cu. ft. of air per minute from the living quarters of a house. If tightly constructed, replacement air cannot enter from outdoors in sufficient quantities to supply the chimney draft. Result: partial vacuum, downdrafts and *smoke*. If sufficient replacement air can enter, the average temperature of the entire house is lowered, cold drafts sweep the floor and automatic furnace controls are out of balance.

The Bennett *"Fresh-Aire"* Fireplace draws replacement air from outdoors through heating chambers and distributes it into the living quarters warm instead of cold. Result: no smoke, no uneven temperatures, no interference with heat controls and a net *gain* in evenly distributed warmth.

Bennett Fireplace Units are described in Sweet's. Bennett Catalog sent free on request. We shall be able to produce when you can build.

BENNETT-IRELAND, 1244 MAPLE ST., NORWICH, N. Y.

BENNETT
Fresh-Aire
FIREPLACES

FOR SALE

FOR SALE: Bound volumes of Architectural Record 1892 to 1910 inclusive. Good condition. Price reasonable.
Box 26, ARCHITECTURAL RECORD, *119 West 40th Street, New York 18, N. Y.*

OPPORTUNITIES AVAILABLE

MECHANICAL ENGINEER: For Plant Layout Department. Experienced in designing mechanical services for production processes and building facilities, involving liquid and gaseous fuels, ventilation, and electric power distribution. State experience, age, salaries received, etc.
Box 28, ARCHITECTURAL RECORD, *119 West 40th Street, New York 18, N. Y.*

MATERIALS HANDLING ENGINEER: Mechanical engineer preferred. Will be responsible for the planning of all materials handling facilities from receipt of raw material to shipping of finished product. State experience, salaries received, etc.
Box 30, ARCHITECTURAL RECORD, *119 West 40th Street, New York 18, N. Y.*

Inviting and Impressive..

Three Sisters Store, Chicago, Illinois. Anaconda Architectural Bronze installed by J. S. Heath Company, Mitchell Corporation, North Chicago, Ill., successor.

The distinguished-looking storefront is an invitation to customers. It is accepted as evidence of the permanence of the establishment.

Through the use of bronze, distinction in storefront and building facade design can be achieved. As practical as it is beautiful, Architectural Bronze provides durability and low upkeep expense. It is rustproof, resists atmospheric corrosion and weathers gracefully.

The American Brass Company has long been the principal supplier of Bronze, Copper and Nickel Silver in the form of extruded shapes, drawn shapes, sheets, etc., as used in the construction of ornamental work of every description. 4434

BUY WAR BONDS . . . PAY YOUR SHARE OF VICTORY

ANACONDA

Anaconda Architectural Bronze

THE AMERICAN BRASS COMPANY—General Offices: Waterbury 88, Connecticut

Subsidiary of Anaconda Copper Mining Company—In Canada: ANACONDA AMERICAN BRASS LTD., *New Toronto, Ont.*

THE RECORD REPORTS *(Continued from page 116)*

REAL ESTATE FORECAST

Continued brisk activity in real estate with residential property prices tending to be generally higher is forecast for the year 1945, the National Association of Real Estate Boards reports as a result of its 43rd semi-annual survey of the real estate market. The survey covered 377 cities, and was compiled from data and opinions supplied by local member boards of the National Association.

Other findings, in the first of three sections of the survey to be released, included: a widespread showing of industrial initiative in planning new postwar products, often requiring new plant construction; increasing concern for the continuing deterioration of property under wartime conditions; and an expectation of the larger cities for increased population and decreased employment in the first five postwar years.

The association reported the following detailed conclusion of the survey:

Real Estate Prices for 1945

More than half of the reporting cities expect residential property prices to go higher, and four out of five war centers expect such an increase. Housing pressure in communities under rent control is such that 83 per cent of these foresee higher prices for dwellings.

For downtown business property, 97 per cent of the cities expect prices at least on the 1944 level and 44 per cent predict a still higher market. In the war areas, three out of every five communities expect higher business property prices.

Industrial Planning

Industries are going forward with plans for new postwar products in 91 per cent of the cities and in 97 per cent of the major war centers. In two out of five of the cities and in three-fourths of the war centers it is indicated that new plant or warehouse construction will be required for the new products.

Property Deterioration

Eighty per cent of the cities have fallen at least 25 per cent behind in normal repairs and maintenance of property. In more than a fourth of the cities, upkeep has been between 25 and 50 per cent of normal. In 12 cities out of every 100, upkeep is 25 per cent of normal or even much lower.

Population and Employment

Seven out of ten cities look for a population growth in the first five postwar years, while 53 per cent expect an employment decline. Generally, it is the larger cities which expect more population and are more pessimistic about employment. Of cities of more than 200,000 population, 69 per cent look for decreased employment and 68 per cent foresee increased population.

The survey also showed that vacant lot sales may have considerable pick-up next year in line with increased home building due to lifting of construction bans. Vacant lot activity will not be so noticeable in war centers, however, because of wartime home building permitted in these areas.

Sixty-eight per cent of the cities report that the building of airports or airparks or improvement of existing posts is an integral part of postwar planning. More than half the cities report deep-freeze storage facilities available to citizens, but only four per cent have plans to add such facilities—indicating that the expected greater use of deep freezing is not yet far along.

(Above) Installation of 83 Wing Revolving Unit Heaters in Plant of Automotive Appliance Manufacturer

The objectionable features of heating systems like those cartooned at the left are the cause of endless complaints.

Cross-sectional view of WING Revolving Unit Heater, showing Motor, Fan, Heating Element and Revolving Discharge Outlet

WING *Revolving* HEATERS

ELIMINATE HOT SPOTS AND COLD SPOTS

Located at roof or ceiling, they revolve slowly, projecting the heated air to the working level in moving streams which sweep slowly through 360 degrees, covering successively every direction instead of constantly in some one direction. The gentle air motion and the thorough coverage bring a sensation of fresh, live, invigorating warmth to workers. **And in the Summer, with the steam turned off, they create a delightful cooling effect that is equally effective in stimulating production.**

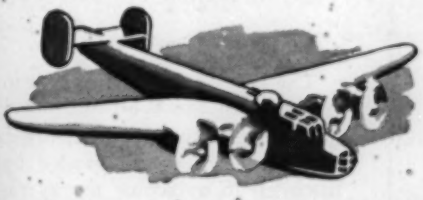
Write for Bulletin HR-3

L. J. Wing Mfg. Co.

151 W. 14th St. New York 11, N. Y.
Factories: Newark, N. J. Made in Canada at Montreal

FREE... *important new book!*

Makes Better-Than-Ever Plywood for War Today... for Better Living Tomorrow



TODAY—The Army and Navy use KIMPREG for bomber floors and doors, packing cases, luggage, hutments, parachute folding tables.

TOMORROW—KIMPREG will be used in construction of prefabricated houses, refrigerator car linings, table tops, piano and radio cases, etc.

Out of a wartime test tube comes the new and greatly needed KIMPREG!* Not a plywood—not a conventional plastic laminate—KIMPREG is a remarkable surfacing material for bonding to the base plywood in conventional plywood hot presses. When applied to plywood, the finished product is more durable—has a higher flexural strength than ordinary plywood—offers resistance to vapor permeability, abrasion, decay. Application of KIMPREG assures moisture-resistance, easy washability. This new plastic surfacing material will make your product scuff-proof—it won't stain—the finish will wear better than paint.

In the post-war world KIMPREG will open new fields for the use of plywood. It may offer new opportunities for your product. It may well represent important savings of money and material to you. So be ready to take advantage of the tested KIMPREG plastic surfacing for plywoods when conversion to a peacetime economy comes. Write for FREE booklet today.

**KIMPREG (Trade-Mark) means Kimberly-Clark Plastic Surfacing Material*

Among the users of KIMPREG are: Buffelen Lumber & Manufacturing Company; Olympic Plywood Company; Washington Veneer Company; and The Wheeler, Osgood Company; all of whom are currently producing a Douglas Fir Plywood surfaced with KIMPREG. This product is sold under the trade name of Inderon.

A PRODUCT OF
Kimberly Clark
RESEARCH

AR-1244

War Products Division
Kimberly-Clark Corporation, Neenah, Wisconsin

Please send me FREE KIMPREG book.

Name of Co. _____ *Att. of:* _____

Line of Business _____

Address _____

City _____ *State* _____

 (Continued from page 24)

truded louvers are made along the edge of the sheets, spaced and angled the same as the strip. The sheets are then pushed into the channel and slid parallel to the strip until the notches engage, forming a wedged lock. Disconnected by a reversal of this procedure.

The strip will come in both flat, for straight connections, and angle, for corner connections. The Sheetlock Co., 4529-31 N. Clark St., Chicago 40, Ill.

DRAINAGE CONTROL VALVE

Combining the automatic swing valve feature and the manually operated gate valve into one unit, the new *Boosey No. 109 Drainage Control Valve* is said to provide positive protection to basements from back flooding of street sewers.

Because the scientific design of the valve body provides two full inches of lip clearance for the automatic bronze swing check valve, floating objects ordinarily will not interfere with its proper seating. As a positive method of controlling the basement openings, a manually operated bronze gate is also provided. As the gate does not require a recess for seating, packed sewage solids cannot prevent complete closing. The unit installs flush with the floor and is therefore readily accessible for cleaning and inspection. Norman Boosey Mfg. Co., 420 N. La Salle St., Chicago 10, Ill.

CONDENSATE UNIT

Available with either a cast iron (Type "V") or steel receiver, a new heavy-duty vertical condensate return unit is designed for installation in a sump to take condensation from return lines that come back close to or below the floor and pump them back to the boiler. It can also be installed to stand on the floor or partially below the floor.

Standard construction and equipment includes a factory assembled unit ready for installation, with pump casing, enclosed impeller, shaft and suspension pipe, thrust bearing and flexible coupling, all assembled on a suspension plate with a steel or cast iron receiver, motor and automatic control equipment and provided with a vent to the atmosphere.

The pump is entirely independent of the receiver and can be lifted out without draining the sump. Motor, shaft, bearings, impeller and cover are factory assembled as a unit, insuring perfect alignment, and since index fitting is employed, reassembly without misalignment is certain. Yeomans Bros. Co., 1433 N. Dayton St., Chicago 22, Ill.

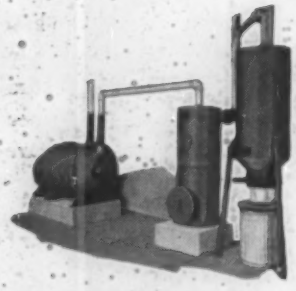
GRADED LIGHTING

The Illuminating Engineering Department of the Westinghouse Electric and Manufacturing Company has developed a system of "graded lighting" intended to overcome the average person's confusion over the term foot-candle.

The core of the system is a new *Graded Light Meter* which records light according to the familiar grades, A, B, C, D and E, with foot candle ranges respectively of 70-150, 30-70, 15-30, 7-15 and under 7. The back of the meter recommends the correct grade for various types of seeing tasks such as fine needlework, studying, card playing and general entertaining.

The system is explained fully in a new book produced by Westinghouse for the utility companies, "Your No. 1 Load Building Opportunity." Also included in the book are a number of illustrations suggesting novel lighting arrangements for decorative effect in home, office and store, using new fluorescent applications.

PROTECT PUBLIC HEALTH *with* SPENCER VACUUM CLEANING



The vacuum producer and dirt container are located in the basement. Piping connects to convenient inlets all over the building.

Churches, once used Sundays only, are today community centers requiring daily cleaning. In fact, any building used by the public is bound to gather volumes of dirt and dust.

Spencer Central Vacuum Cleaning Systems make it easy to do a perfect cleaning job in a minimum of time.

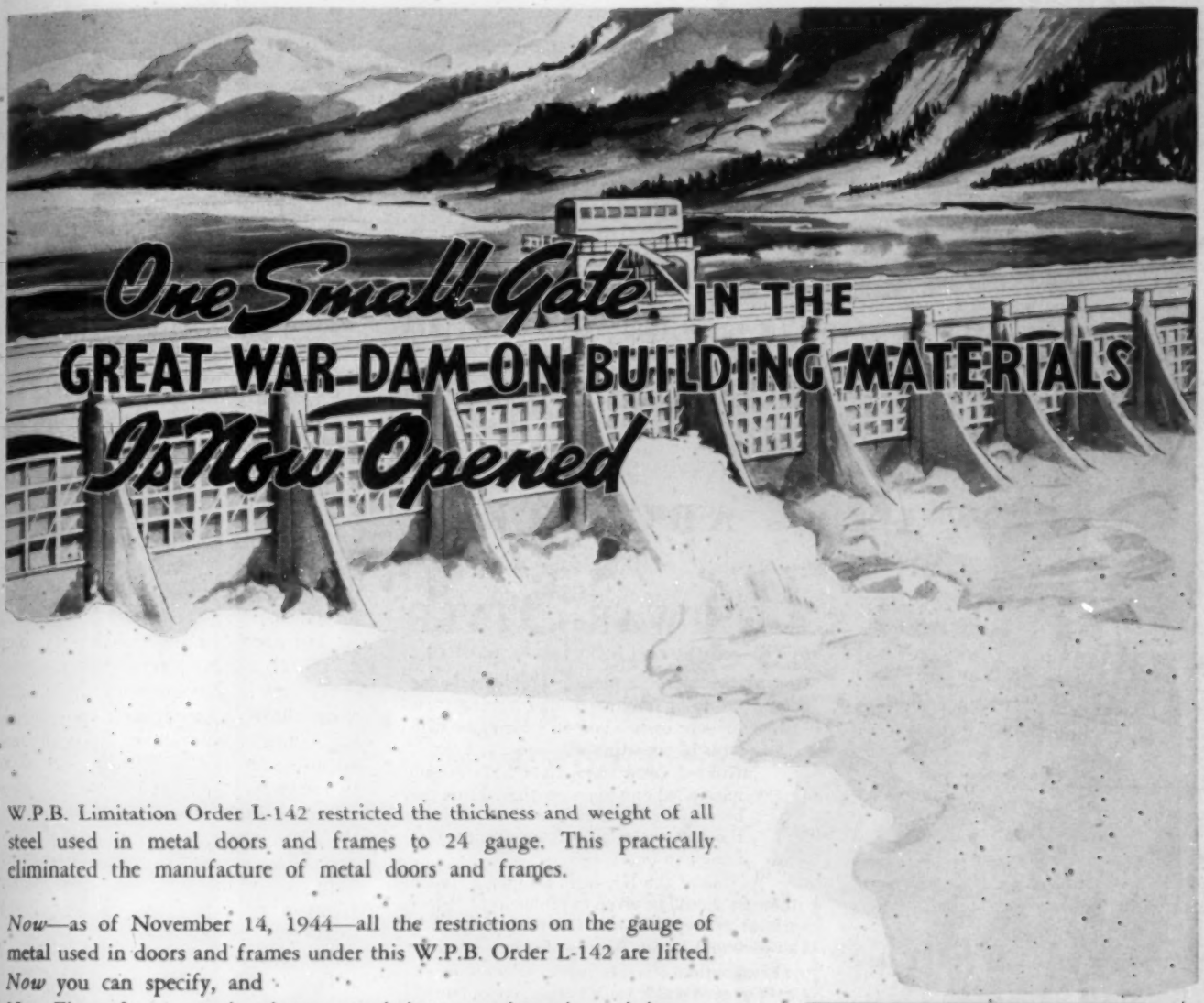
Equally effective on rugs, bare floors, or cement and with special tools to clean organs, boiler tubes and decorations, this system more than saves its original cost in a few years.

Special bulletins on Schools, Office Buildings, Hotels, Theatres and other buildings on request.

SPENCER HARTFORD VACUUM CLEANING

THE SPENCER TURBINE COMPANY, HARTFORD 6, CONN.

256D



W.P.B. Limitation Order L-142 restricted the thickness and weight of all steel used in metal doors and frames to 24 gauge. This practically eliminated the manufacture of metal doors and frames.

Now—as of November 14, 1944—all the restrictions on the gauge of metal used in doors and frames under this W.P.B. Order L-142 are lifted.
Now you can specify, and
Now Firecraft can supply whatever steel that your planned metal door or frame construction requires.

(Provided proper priorities have been granted)

W.P.B. Limitation Order
L-142
November 14, 1944
RESCINDED

For forty years FIRECRAFT DOOR COMPANY have been building better metal doors and frames of the standard types.

Demands of war construction have enabled this organization of door specialists to develop advanced designs in metal doors for special services and applications. Among these are

Firecraft Steel Sound-Insulating Doors
Firecraft Steel Lead-lined X-ray Doors
Firecraft Steel Heat-and Vapor-resisting Doors

Looking ahead to peace conversion, these long-experienced door specialists offer you their skilled services in the solution of any industrial, institutional or commercial door closure problem.

FIRECRAFT
QUALITY METAL PRODUCTS

FIRECRAFT DOOR COMPANY

DIVISION OF FIRECRAFT CORPORATION

3321 SO. WALLACE ST. CHICAGO 16, ILL.

 (Continued from page 106)

the outside; what really matters is the way they limit the physical and spiritual horizons of the people who live behind them."

Other chapters deal with the use of structural steel and non-ferrous metals in construction, of plywood, plastics and glass, rubber, linoleum and cork. There is a fine one by George Nelson on "Stylistic Trends in Contemporary Architecture," and a highly interesting one by S. A. Witzel on the layout and organization of farms.

AIRPORT ENGINEERING

By H. Oakley Sharp, G. Reed Shaw and John A. Dunlop. New York 16 (440 Fourth Ave.), John Wiley and Sons, Inc., 1944. 8½ by 11 in. viii + 150 pp. illus. $5.00.

Primarily a book for the engineer rather than the architect, this is a careful and scholarly text on every phase of airport construction. The material presented, based largely on the findings of the Civil Aeronautics Administration, includes site selection and planning, classification of airports, soil surveys, drainage, soil stabilization, types of pavements, lighting, and airport buildings. It is all good, basic information, ably presented, and succeeds in giving an excellent picture of the many-sided problem of airport construction.

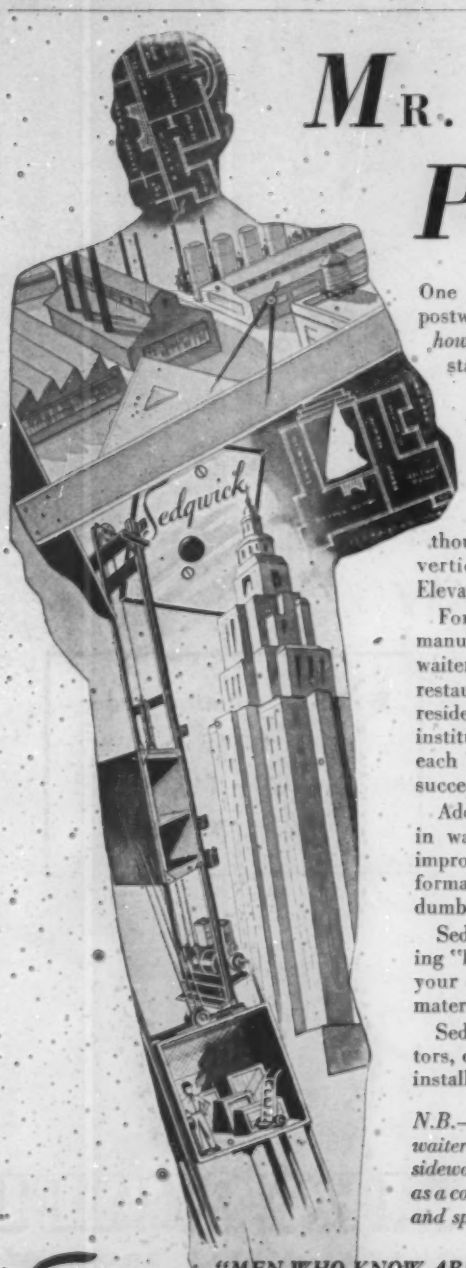
Progress in aviation, however, is so rapid, particularly in these wartime days, that even in the short time required for the printing of the book, much of the design data has become obsolete. This is not a criticism of the authors, but merely a warning that in the face of the tremendous strides being made by the aviation industry, not even a book just off the press can be accepted as the final word. Airport requirements change almost literally from day to day.

Take the CAA table on airport size standards, for example, on page 6 of the present volume. Landing strips for Class 4 airports are listed as 4500 ft. and over in minimum length. But as the article on airport requirements and types in this issue of the ARCHITECTURAL RECORD explains (pp. 78-83), La Guardia and other international airports are now being built with 6000 ft. runways, and provision in some cases is being made for extension to 10,000 ft. There is a whole new theory of runway involving tangential rather than parallel construction, and the new Idlewild field in New York may be completely redesigned as a result.

Of chief interest to architect readers is the chapter on airport buildings. Although very short as far as the text is concerned, this chapter has a wealth of information in it because of the numerous and clear plans it includes. Stress is laid throughout on the necessity for allowing for future expansion in planning airport structures. "Hangars can be duplicated to handle additional traffic," it is pointed out, "but there should be only one passenger terminal building. Provision should be made so that interior partitions may be moved for a reallotment of space inside the building." All the plans show such provision. Here again, however, it must be noted that airport planning is not static; much of the material in this chapter as well as in some of the others is likely to be quickly out of date, in this case when the new CAA publication on airport buildings is released in two or three months.

Because of this rapid progress and the inevitable out-dating of any text on the subject, it might be a good idea to give any book pertaining to airports a looseleaf binding to permit it to be brought up to date from time to time. And, like the airport itself, such a book should provide for expansion!

(Continued on page 124)



MR. ARCHITECT
POSTWAR STYLE

One of the most perplexing problems facing postwar-planning architects and engineers is *how to reduce costs*—and still maintain high standards of operating efficiency.

Reduced costs come from little economies piled one upon another. From the best use of materials and the use of the best materials—from efficiency of design and execution.

As one of the big, little economies much thought should be given to problems of proper vertical transportation. Consider Sedgwick Elevators and Dumb Waiters, for example.

For more than 50 years Sedgwick has designed, manufactured and installed elevators and dumb waiters in factories, hotels, hospitals, schools, restaurants, stores, libraries, churches, private residences and commercial offices, as well as institutional and public buildings—drawing on each preceding year's experience to improve succeeding models.

Added to past experience, the lessons learned in wartime manufacturing will take form in improvements in design, construction and performance of Sedgwick's postwar elevators and dumb waiters.

Sedgwick experience plus Sedgwick engineering "know how" can help solve at least part of your cost reduction problems by moving men, material and merchandise better and faster.

Sedgwick welcomes inquiries regarding elevators, dumb waiters and special lifts for postwar installation.

N.B.—The Sedgwick line of elevators and dumb waiters includes hand power dumb waiters—freight, sidewalk, residence and hospital elevators, as well as a complete line of electric elevators, dumb waiters and special lifts.

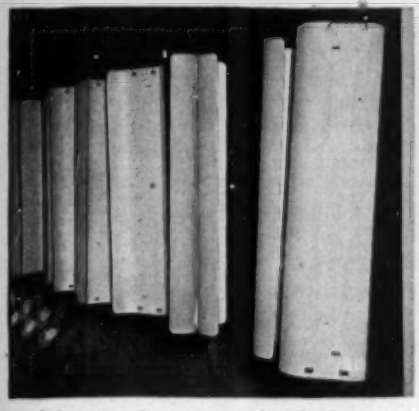
"MEN WHO KNOW ARE SOLD ON SEDGWICK"

Sedgwick MACHINE WORKS, INC.
142 WEST 15th STREET NEW YORK 11, N. Y.
Since 1893 designers and manufacturers of specialized lifting equipment
ELEVATORS • HOISTS • ROTO-WAITERS • MATERIALS HANDLING EQUIPMENT

SYLVANIA NEWS
ARCHITECTURAL EDITION

DECEMBER *Published in the Interests of Better Sight and Sound* 1944

Plastic Finish for Reflectors Proves Its Superiority



Sylvania reflectors coated with plastic finish emerging from part of curing process.

After extensive study of reflector coatings, Sylvania has standardized on a plastic finish of exceptional hardness, flexibility, and light-reflecting efficiency. This finish —*not* an ordinary paint—is produced by the polymerization, under a unique heat treatment, of different molecules to form a new chemical compound.

This plastic finish has proved far superior to paint in its resistance to moisture and corrosive vapors. It is more flexible than vitreous enamels, and withstands distortion and bending more successfully.

DID YOU KNOW...

That Sylvania Blacklight Lamps are used for applications as diversified as the illumination of fluorescent instrument dials on airplanes, and the sorting of textile yarns?

★ ★ ★

That Sylvania is the only manufacturer in the fluorescent lighting field to produce "Complete Packages of Light?" Sylvania lamps, fixtures, and accessories are all carefully engineered to operate together harmoniously and efficiently.

Sylvania Lamp Life Ratings Newly Defined for Longer Time-on Cycles

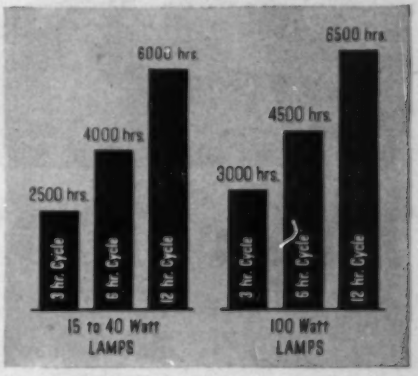
Permit Lower Operating Cost Estimates In Recommending Fluorescent Lighting

A more exact definition of the life ratings of Sylvania Fluorescent Lamps, based on a planned cycle of operation, indicates that architects, in recommending new installations of fluorescent lighting, can frequently point out to their clients the probability of considerably longer lamp life than would have been expected under previously published ratings. Hence preliminary estimates of over-all operating costs can be substantially reduced in many instances, thus placing Sylvania Fluorescent in a more favorable cost position.

BASIS OF RATINGS

Previous life ratings of Sylvania Fluorescent Lamps have been based on a 3-hour burning cycle. It is, of course, well known that in many commercial and industrial installations the time-on cycle is considerable longer than 3 hours. Since the frequency of starting is an important factor in fluorescent lamp life, longer time-on cycles will be reflected in increased life.

For this reason, Sylvania has extended its lamp ratings to include the 6-hour and 12-hour cycles frequently encountered in practice. These ratings are shown in the accompanying graph.



Life ratings of Sylvania Fluorescent Lamps for 3-, 6-, and 12-hour cycles, when burned under specified test conditions.

GERMICIDAL LAMP DATA PUBLISHED

Information on Standard Germicidal Lamps is now available in Sylvania's recently issued Special Electronic Products Bulletin. Architects will find these lamps of interest from the standpoint of their applications in hotels, restaurants, hospitals, and schools to prevent the contamination of drinking glasses, dishes and silverware; and in manufacturing plants to prevent contamination of products. Sylvania engineers aid in the design of installations.

Architects interested in these lamps may obtain copies of the Special Electronic Products Bulletin from Sylvania.

"It's that coal mining company again. Their office workers' efficiency went up so much since we recommended Sylvania Fluorescent, they want to know if we can suggest anything for the miners' CAPS!"

SYLVANIA ELECTRIC PRODUCTS INC.
Salem, Massachusetts

MAKERS OF FLUORESCENT LAMPS, FIXTURES, ACCESSORIES, INCANDESCENT LAMPS, RADIO TUBES, CATHODE RAY TUBES, ELECTRONIC DEVICES

REQUIRED READING (Continued from page 122)

THE PRINCIPAL IN THE MODERN ELEMENTARY SCHOOL

By Robert Hill Lane. Boston, Mass. (2 Park St.), Houghton Mifflin Co., 1944. 5⅛ by 7¾ in. xi + 313 pp. illus. $2.50.

Written solely for the elementary school principal and the school superintendent, this latest volume by Robert Hill Lane contains one chapter and a number of plates that will be of interest to the school architect as well. For Mr. Lane believes firmly in schools designed not to flatter the whim of the school board, but to meet the needs of the children—and he knows those needs.

"One can almost count on one hand," he says, "the number of elementary-school buildings in this country planned primarily in terms of their use for the comfort and delight of children. So long as we are committed to the practice of making the new school building a show place on equal terms with the new City Hall or the Soldiers' Memorial, we shall be violating the basic principles of functional architecture."

Out of his own first-hand experience as elementary school teacher and principal (he is now assistant superintendent of schools in Los Angeles), he outlines six basic considerations in planning the new elementary school building: (1) the site must be ample—a minimum of five acres for the modern program; (2) the site must be centrally located with respect to the community to be served; (3) the site must be level; (4) classroom units should be located as far from the main line of traffic as possible, with the auditorium nearer the main line of traffic, perhaps, but preferably on a side street, and all space along the main line of traffic reserved for playground or garden, or both; (5) the school building should be orientated so as to ensure proper lighting of the classrooms; (6) the building should be insulated from noise by acoustic ceilings and noise-resistant floor coverings.

In addition to a description of the various functional units of the school, Mr. Lane gives us a summary of classroom requirements, discusses noise reduction, floor coverings, the lighting problem, and furniture trends. And finally, he illustrates his points with 81 plates showing schools built within the last eight years. Plans, furniture and equipment, floorings and lighting are included among the plates.

It all adds up to a decidedly constructive chapter on school architecture from the point of view of those who must use what the architect designs.

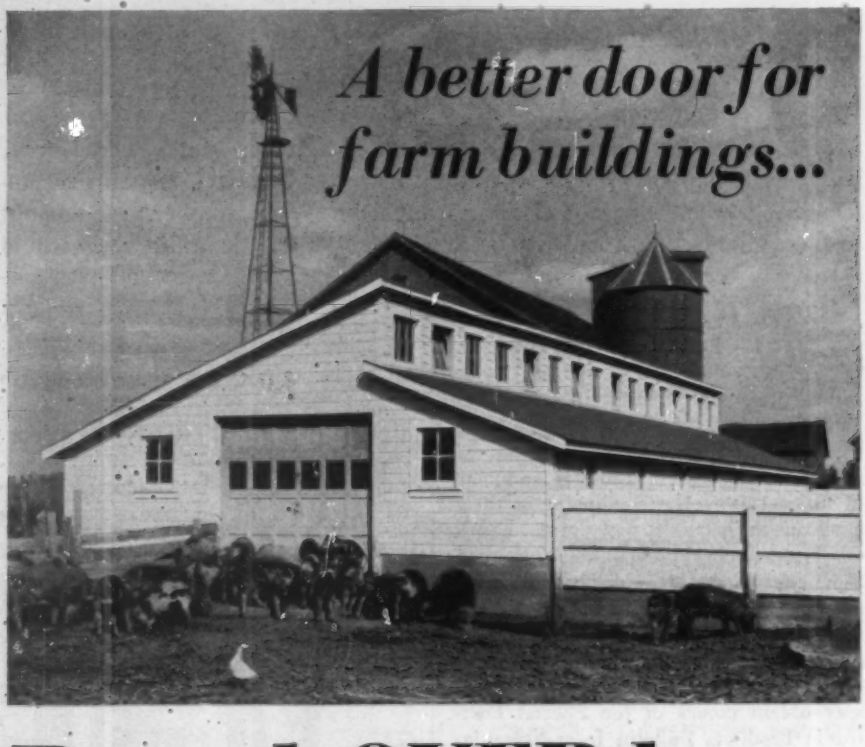
AIR CONSERVATION ENGINEERING

G. S. Daupinee, F. H. Munkelt and H. Sleik, eds. New York (114 E. 32nd St.), W. B. Connor Engineering Corp. 1944. 8½ by 11 in. 111 pp. illus. $2.00.

Here is a valuable and timely discussion of that necessary adjunct to air conditioning—air recovery, the "restoration of air freshness to the end that air, otherwise wasted, may be reused and its thermal and psychrometric value—its heat or lack of heat, its moisture or dryness—be conserved."

Following a discussion of air requirements and the nature of air-entrained impurities (dust, smoke, bacteria and gases), the various methods of air purification are described: the introduction of chemical agents, in one form or another; condensation by a reduction in the air temperature; air washing or scrubbing. All of these approaches to air purification are definitely limited, impractical or uneconomical, the editors conclude. "There is however," they continue, "a simple,

(Continued on page 126)



Barcol OVERdoor

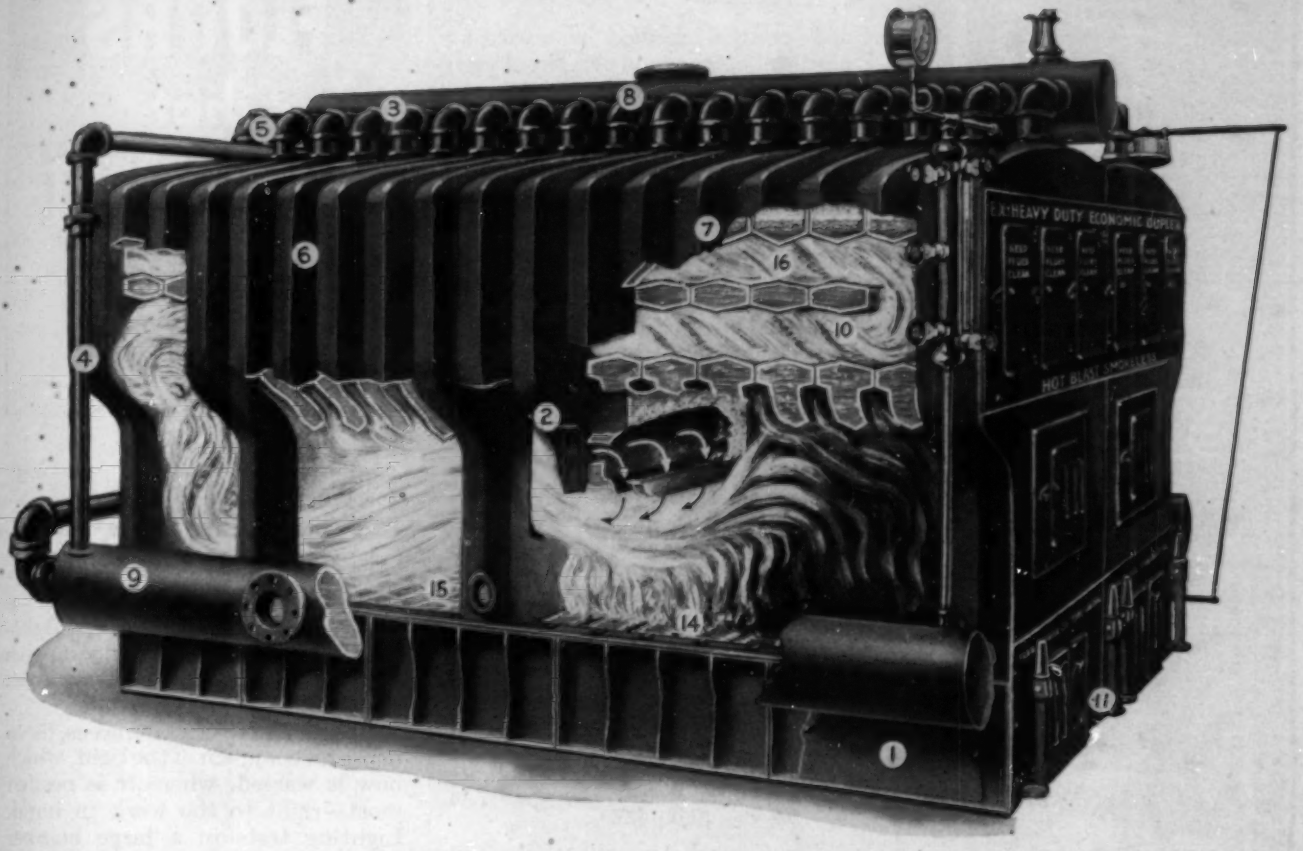
BARCOL
OVERdoors
Electric Door Operators

Up-to-date farmers are using Barcol OVERdoors, especially on new buildings like the modern, efficient hog house shown above. It used to be that hogs were raised in squalor; now they are given clean, tight, warm buildings and good yards, for one reason — it makes for better hogs. This hog house has a Barcol OVERdoor at each end so the trucks can drive straight through. Barcol OVERdoors are quality built, rattleproof, weathertight, easy working, long lived — exactly the kind of door intelligent farmers will use. Architects and builders — specify Barcol OVERdoors for farm buildings!

FACTORY-TRAINED SALES and SERVICE REPRESENTATIVES IN PRINCIPAL CITIES

BARBER-COLMAN COMPANY
102 MILL ST. • ROCKFORD, ILL.

PROX CONTINUOUS SERVICE BOILERS



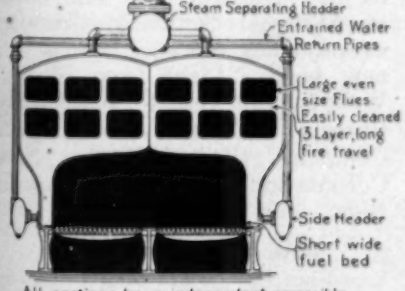
Continuous service is insured with Prox Boilers because they are assembled with independent, accessible connections. This assembly results in each section being truly a boiler in itself. In case of mishap, any section can be plugged off and heat maintained while waiting for repairs which can be made when boiler is not in use. This distinct advantage of Prox Boiler design avoids closing a building in cold weather and eliminates the necessity of complete dismantling.

Like taking a book from a shelf, any broken section in a Prox Boiler can be slipped out and replaced. Since there are no internal connections it is not necessary to tear down the whole boiler and destroy the covering. This feature reduces maintenance costs to an absolute minimum.

You can specify Prox Boilers for all buildings with complete assurance of satisfied clients. Quality construction and materials guarantee dependable, long lasting performance.

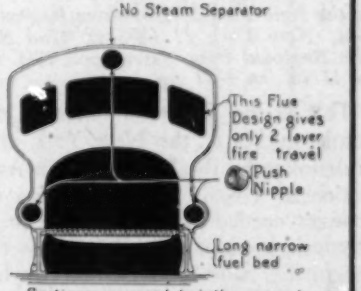
A COMPARISON

PROX DUPLEX BOILER HEADER DESIGN


Steam Separating Header
Entrained Water Return Pipes
Large even size Flues. Easily cleaned 3 Layer long fire travel
Side Header
Short wide fuel bed

All sections have independent accessible connections to side header and steam separating header. This insures continuous heat, ease in replacing broken sections and dry steam to the mains.

TYPICAL PUSH NIPPLE BOILER



Sections squeezed together upon internal push nipple connections. Broken sections cannot be plugged off and heat continued. Boiler must be torn down to remove broken section.

FRANK PROX COMPANY, INC.

1201 South First Street

TERRE HAUTE, IND.

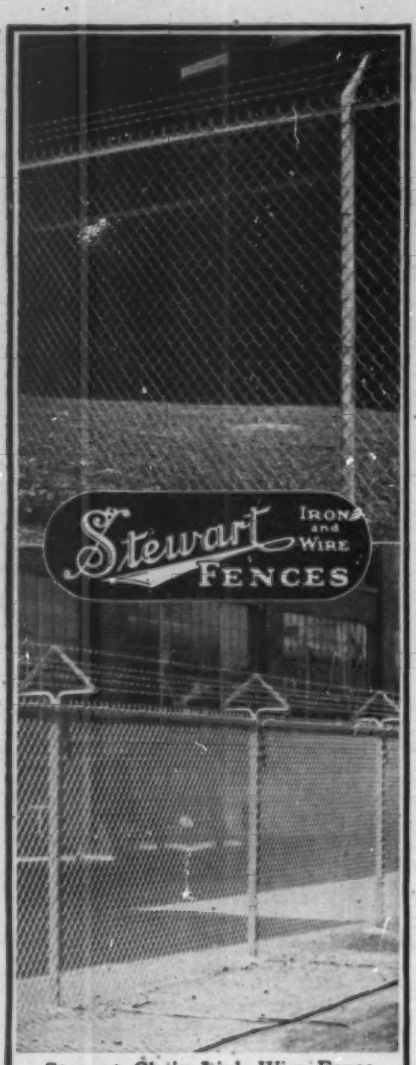
"ON THE BANKS OF THE WABASH SINCE 1875"

BEFORE SPECIFYING ANY BOILER CHECK THESE PROX ADVANTAGES:

1. Non-Corrosive cast iron construction for permanence.
2. Hot Blast Smokeless air intake supplies auxiliary oxygen for complete combustion . . . utilizes full heat value of fuel.
3. Positive Steam Separating Header assures dry steam.
4. Returns or bleeders carry back to boiler any water escaping with the steam.
5. Independent accessible connections guarantee continuous service by permitting any section to be plugged off while firing is continued.
6. Each section can be slipped out and replaced without disturbing other parts of the boiler.
7. Large water capacity prevents sections breaking through unsteady water line.
8. Single direct flow connection eliminates cost of header construction and saves head room.
9. Side headers provide equalized circulation through boiler.
10. Spiralling action of hot gases in easily cleaned flues increases effectiveness of heating surfaces.
11. Four independent grate area controls make partial firing possible in mild weather.
12. Cast iron construction and independent connections assure safety by permitting expansion and contraction of all boiler parts.
13. No part too large to take through doroways.
14. Well proportioned fire box is short and wide for easy control of fuel bed.
15. Intense heat in secondary combustion space completely burns smoky, volatile gases.
16. Three layer fire travel affords full transmission of heat to water providing efficiency, economy, low stack temperature.

ADVANTAGES OF PROX BOILERS ARE ENJOYED BY THESE AND MANY OTHER AIRPORTS:

Mitchell Field, Long Island, N. Y.
Lockbourne Air Base, Lockbourne, Ohio
Great Falls Airfield, Great Falls, Mont.
Air Support & Ferry Command, Memphis, Tenn.
Bowman Field, Louisville, Ky.
Salt Lake Cit, Airfield, Salt Lake City, Utah



Stewart Chain Link Wire Fence is available NOW for certain industrial use. Wherever fence is a requirement, it will be to your advantage to talk it over with our engineers. ¶ The top illustration shows Stewart style 3TH, arranged for three strands of barbed wire. Just above is shown Stewart style 5TH which has overhang for five strands of barbed wire and affords two-way protection. ¶ Write for catalog I-42 which contains complete specifications on all types of Stewart Industrial Fence and Entrance Gates. This catalog also contains information on Stewart wire specialties such as Steel Folding Gates; Wire Mesh Partitions; Wire Window Guards and many other products. ¶ You should also have a copy of Stewart Book of Designs D which will prove helpful wherever plain or highly ornamental iron fence is involved. Copy sent on request.

THE STEWART
IRON WORKS CO., Inc.
1177 Stewart Block
CINCINNATI 1, OHIO

REQUIRED READING

(Continued from page 124)

and practical method of extracting nearly all odorous and objectional gases and vapors from air, namely, the process of *adsorption*. Adsorption is a unique physio-chemical property possessed by a number of substances, the one best adapted to practical air purification being activated carbon."

It is this process, termed "fundamental to air conservation engineering," which occupies the greater part of the manual. Just what activated carbon is, and how it works in air conservation, is described fully. Cost comparisons, equipment, typical applications and examples of air recovery installations conclude the first half of the book. The second half is a comprehensive reference data section comprising tables of ventilation requirements, territorial climatic conditions, outdoor air heating and refrigeration loads, properties of gases and vapors and their safe concentration, psychrometric charts and data.

THE SMITHSONIAN INSTITUTION

Annual Report of the Board of Regents for the year 1943. Washington, D. C., U.S. Govt. Prtg. Office, 1944. 6 x 9¼ in. xi + 609 pp. illus. $2.00.

The General Appendix of the new Smithsonian report contains several articles of interest to the architect. These are: "Solar Radiation as a Power Source," by C. G. Abbot; "Progress in New Synthetic Textile Fibers," by Herbert R. Mauersberger; "New Metals and New Methods," by C. H. Desch, F.R.S.; and "The Natural-History Background of Camouflage," by Herbert Friedmann.

THE ECONOMIC STATUS

Of the New York Metropolitan Region in 1944. New York 17 (205 E. 42nd St.), The Regional Plan Ass'n, Inc., 1944. 8½ by 11 in. xx + 91 pp.

This is the first of a series of economic studies of the New York area, undertaken by the Regional Plan Association as a basis for determining the changes needed in plans for the area's physical development. From this and the further studies already under way will be drawn up recommendations for the elimination of obstacles increasing local production costs and practical recommendations for the more efficient functioning of the region as a unit.

Included in the present volume are analyses of the various types of employment, the employment trends, the interdependence of the several sections of the region, and the postwar employment goal for the New York region as a whole, broken down and analyzed according to types of employment.

FLOORS that THROW LIGHT WHERE YOU NEED IT

Greater illumination of working areas secured by installing Light-Reflecting Floors made with Atlas White cement.

Combining the functions of a durable industrial floor and a light-reflector, *white* cement floors give a fuller measure of efficiency from every lighting kilowatt.

Being close to working areas, these floors reflect much of the light, which now is wasted, where it is needed most—right to the work in hand. Lighting tests in a large bomber plant showed that a floor of Atlas *White* cement reflected 61% more light than an adjacent *gray* cement floor under identical lighting. This added light-reflection brings many other advantages; among them faster production, fewer accidents, fewer rejects, less eyestrain and fatigue, and higher employee morale.

Light-Reflecting Floors made with Atlas *White* cement are as adaptable to modernization or conversion as to new construction. The entire story of light reflection, construction, maintenance and cost is told in a new book, "Light from Floors." Write for your copy to: Atlas White Bureau, Universal Atlas Cement Company (United States Steel Corporation Subsidiary), Chrysler Bldg., New York 17, N. Y.

HOW ABOUT MAINTENANCE

Experience shows white-cement floors are easy to clean, easy to keep clean, and retain their reflection advantage. Maintenance is simple—frequent sweeping, occasional damp mopping, periodic scrubbing.

AR-F-30

ATLAS WHITE CEMENT
For Light-Reflecting Floors

You "build in" electric wiring

Why not specify a built-in sound system?

COMMUNICATION through sound systems has become vitally important to the management of factories, hotels, office buildings, auditoriums, hospitals and schools — so important that nearly every modern building needs a sound system. To satisfy this need it is wise to provide for a *built-in* sound system in the design, rather than to add it after the building has been completed.

The sound system is no longer an accessory. Like the other built-in utilities — plumbing, heating, lighting, air-conditioning, the sound system developed logically; first, the experimental stage, then, portable or added-on sound equipment, and now — modern *built-in* sound.

It *costs less* to build in a sound system than to add it later.

See our catalogue in SWEET'S. If you need assistance in designing adequate sound systems into your projects, call on RCA sound specialists or write RADIO CORPORATION OF AMERICA, Sound Equipment Section (70-83), Camden, New Jersey. In Canada, RCA VICTOR COMPANY LIMITED, Montreal.

RCA SOUND SYSTEMS

RCA

RADIO CORPORATION OF AMERICA

RCA VICTOR DIVISION · CAMDEN, N. J.

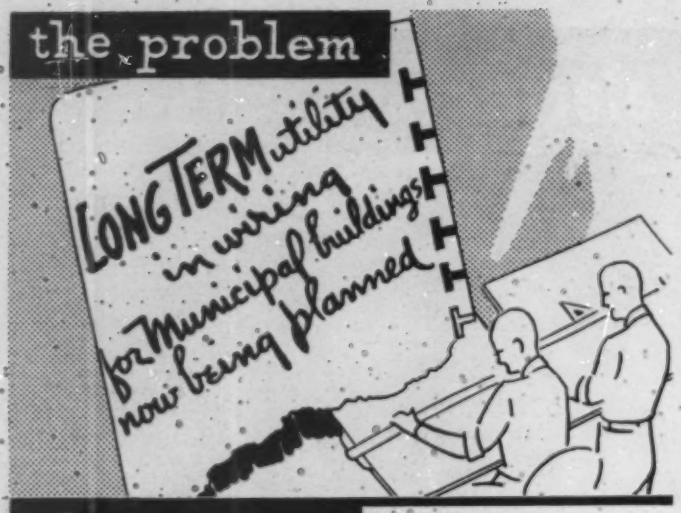
LEADS THE WAY.. *In Radio.. Television.. Tubes.. Phonographs.. Records.. Electronics*

(Continued from page 83)

of-way, using a roadside development area as a runway. It is implicit in the program of those advocating Flight Strips, that they be built and maintained from public highway funds.

Several plans for financing a comprehensive airport program have been proposed. Presumably, federal aid will be indicated. Major airports, at least, have been generally recognized as elements of public service and responsibility, similar to highways and harbor facilities. The principle of federal aid to these facilities has long been accepted. The Randolph Bill (H. R. 5024) entitled "Federal Aid Airport Act," now before Congress, provides that funds for airport construction shall be supplied by the federal government and by the states, equally.

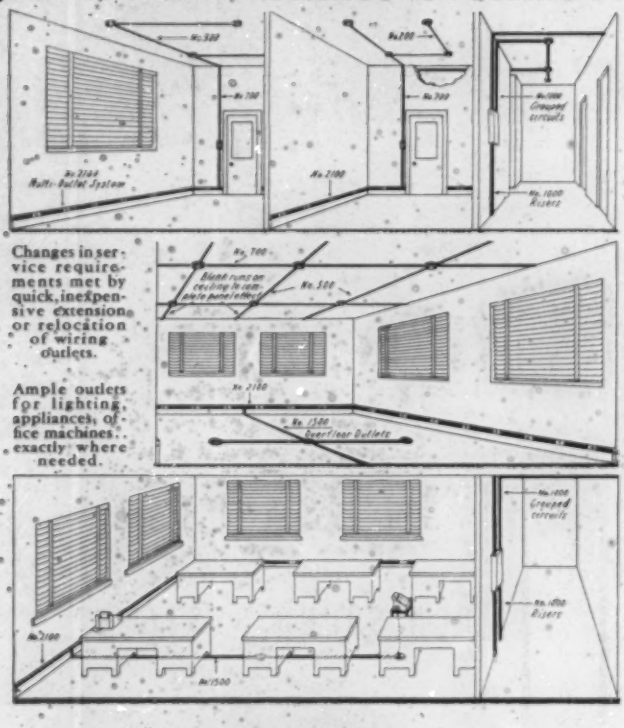
Much hard work needs to be done, and many a knotty problem resolved, before adequate ground facilities materialize to meet the immensely expanded requirements of the nation's postwar establishment. Communities planning their air futures must—above all—avoid two pitfalls: that of building an elaborate and expensive airport, only to find that air traffic does not warrant such an outlay at that particular location; and that of constructing a well-planned and well-equipped airport without due allowance for expansion. As Warner has pointed out: "If an airport is made too large, a part of the capital expenditure will have been wasted. If it is too small, the whole amount may have been lost."



the answer

WIREMOLD

Functional WIRING SYSTEMS . . .



Changes in service requirements met by quick, inexpensive extension or relocation of wiring outlets.

Ample outlets for lighting, appliances, office machines, exactly where needed.

- Wiring for specially designed and built-in lighting installations, both fluorescent and incandescent, can best be done with Wiremold Wiring Systems and Fittings.
- Wiremold Raceways and Fittings are listed by Underwriters' Laboratories and conform to Federal Specification W-R-32.
- Wiremold Engineering Data Sheet Service and literature and the help of our Engineering Department are freely available to Architects. Write direct to The Wiremold Company, Hartford, 10, Conn.

KNOW YOUR WIREMOLD

Consult Your Electrical Contractor

SEE OUR CATALOG IN SWEET'S

NEMA

THE WIREMOLD COMPANY HARTFORD 10, CONN.

For LOW COST INSURANCE

--against the danger of scalding water
In shower baths and wash sinks
1 POWERS CONTROLLER will SAFEGUARD as many as 25 showers against scalding water

Use Powers thermostatic water mixing valves for Group Showers, Wash Sinks, Hot Water Line Control and Industrial Processes. Capacities up to 2,650 g.p.m. Write for Circular 3017. THE POWERS REGULATOR COMPANY, 2752 Greenview Avenue, CHICAGO—Offices in 47 Cities.

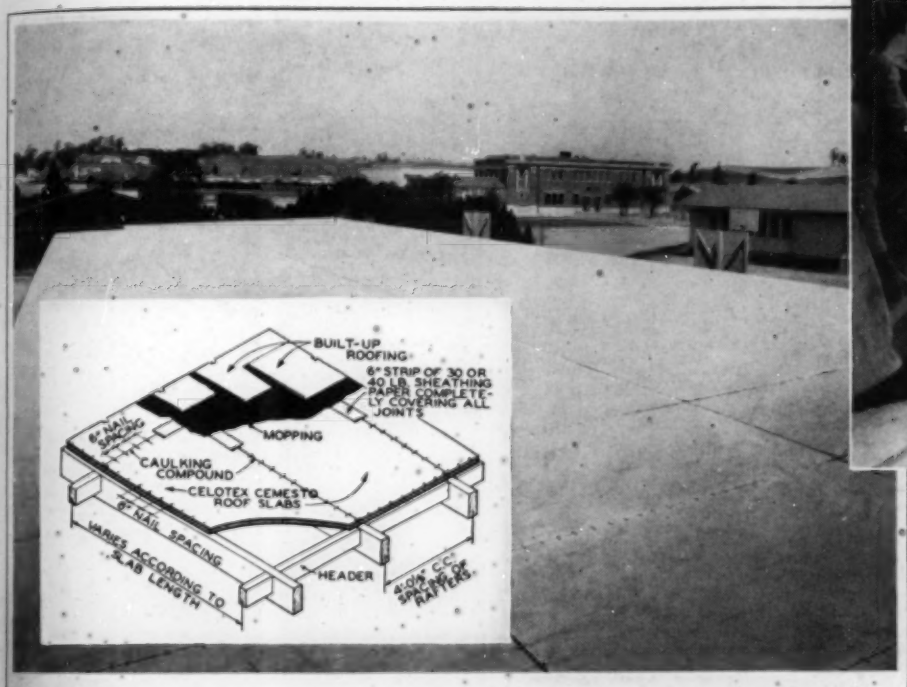
POWERS WATER TEMPERATURE CONTROL

Why More and More Architects are Specifying

CEMESTO

REG. U. S. PAT. OFF.

for Modern Insulated Roof Decks!



This roof deck is typical of many successful Cemesto applications. Phantom view shows how Cemesto is usually applied, and how built-up roofing is added.

See how easily these workmen apply Cemesto. It's light . . . easy to handle . . . easy to work with.

TODAY, architects the country over are meeting their need for high speed, high quality roof deck construction with 1-9/16" Cemesto! It replaces "hard-to-get" lumber sheathing. And it's available in *any* quantity!

Cemesto has *proven* its worth on *many* successful roof deck installations large and small . . . all the way from garages to hangars, hospitals and industrial plants!

Many Major Advantages

The Cemesto roof deck incorporates in *one* material both structural deck and insulation . . . thus effecting a substantial saving in application.

It's lighter than common roof decks, yet rigid . . . making it possible to effect a saving of supporting members and superstructure.

The smooth, firm asbestos-cement surface protects the material during application under any weather conditions . . . and provides an ideal base for composition roofing.

When roof deck is exposed as a ceiling, the light grey Cemesto surface furnishes good light reflecting value . . . plus a pleasing and durable finish that requires no painting. And heat loss through the roof is reduced by as much as 40% over 2" wood sheathing!

In addition, Cemesto is fire and moisture resistant . . . and can be pre-cut to needed sizes for amazing speed and economy of application!

Look into Cemesto for *your* next roof deck job. It will pay you!

What Cemesto Is . . .

It's a multiple-function building material with a core of Celotex cane fibre insulation, sheathed on both sides with an eighth-inch layer of asbestos cement bonded to the core with waterproof, vaporproof, bituminous asphalt adhesive. Both faces are smooth and hard, warm grey in color. Its rigidity eliminates need for intermediate support. Cemesto comes in 4' wide panels, 4', 6', 8', 10', or 12' long, and in thicknesses of 1-1/8", 1-9/16" and 2". It is also used vertically as an exterior wall surface or for interior partitions.

Consult Our Architects' Service Department!

If you need technical assistance in planning a Cemesto roof deck, our Architects' Service Department will gladly study any designs you are developing . . . suggest methods of installing Cemesto . . . furnish material costs on your job. Drop a note on your letterhead to: Celotex Corporation, Dept. AR-12, Chicago 3, Illinois. A trained representative will call. No obligation, naturally.

CELOTEX

REG. U.S. PAT. OFF.

BUILDING PRODUCTS

Plan Now for 1980

1910
SLOAN FLUSH VALVES INSTALLED BACK IN 1910
1945
ARE STILL IN FAITHFUL OPERATION IN 1945
1980
LOOK 35 YEARS AHEAD TODAY AND SPECIFY SLOAN

Specify Sloan Flush Valves for your Post-War Building . . .

plan wisely on Sloan's unequalled Record of Performance

Back in 1910 the Sloan Valve Company did not sell its Flush Valves on the premise that they would last for 35 years ('til 1945)—but hundreds of Sloan Flush Valves installed *then* are still in service *today* and are still as good as new. They practically refuse to wear out.

On this premise the Sloan Flush Valves you specify today for your post-war building will give the same dependable trouble-free service—plan now for 1980.

When ordering flush valves specify SLOAN—the acknowledged leader by which all other flush valves are judged. Remember—*there are more Sloan Flush Valves sold than all other makes combined.*

Refer to Sloan's catalog No. 40 for complete roughing-in guidance and for information on the Flush Valves made famous by Sloan for more than a third of a century.

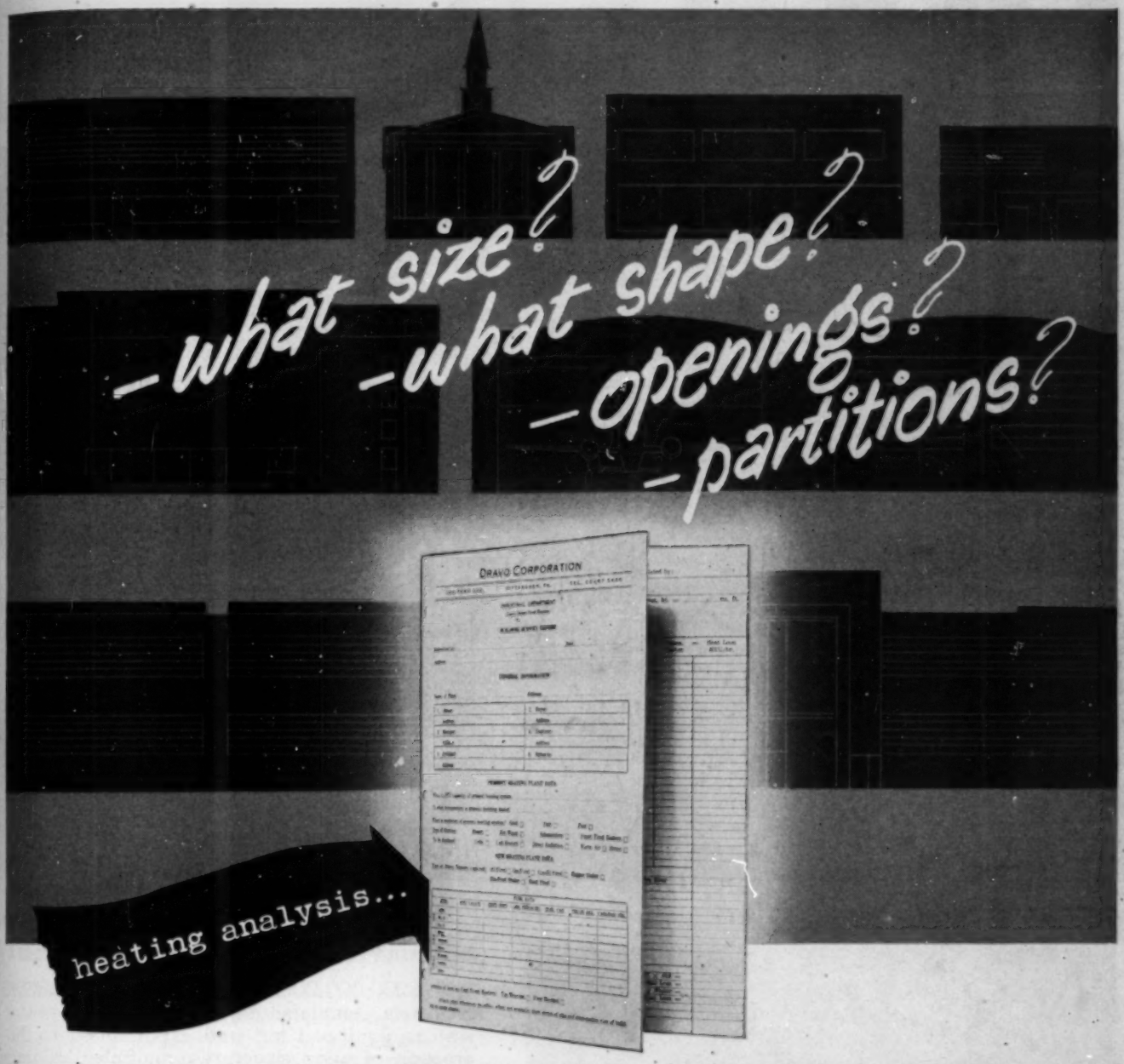
Sloan Valve Company has been awarded the Army-Navy E three times for excellence in production.

ORDER L-42 SCHEDULE V, AMENDED NOVEMBER 7, 1944

The latest revision to Order L-42, Schedule V, releases brass for the manufacture of Flush Valves—provided no additional labor is required in the conversion. Be assured that Sloan will manufacture *all-brass* Flush Valves under the conditions of this order just as soon as we are cleared by the War Labor Board and just as soon as we can secure delivery of the materials required.

NOTE: Plating restrictions of Order L-42 remain unchanged.

SLOAN VALVE COMPANY, 4300 W. LAKE ST., CHICAGO

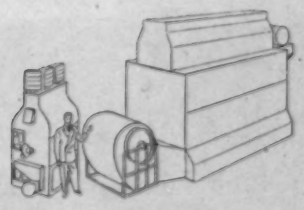


Many of the structures to be built or converted in the immediate future will be well suited to the use of direct fired warm air heating. Hangars, auditoriums, industrials, warehouses, churches, supermarkets, garages, showrooms—these and many other building types with large unobstructed areas are frequently ideal for Dravo direct fired warm air heating. This simple, direct method has, during the past few years, firmly established itself by proved economy of installation and operation.

By the time a building has reached the preliminary plan stage we can furnish a basis for estimating the cost of installing Dravo direct fired heating. The Dravo Building Survey report organizes the data. Our engineering department will suggest a suitable system, or base an estimate on your own layout. If you'd like a specific analysis of any projected building, write now to Dravo Corporation, Heating Department, 300 Penn Avenue, Pittsburgh (22), Pa., for a Building Survey blank—fill it out, and we'll furnish cost and operating figures. The survey will cost you nothing.

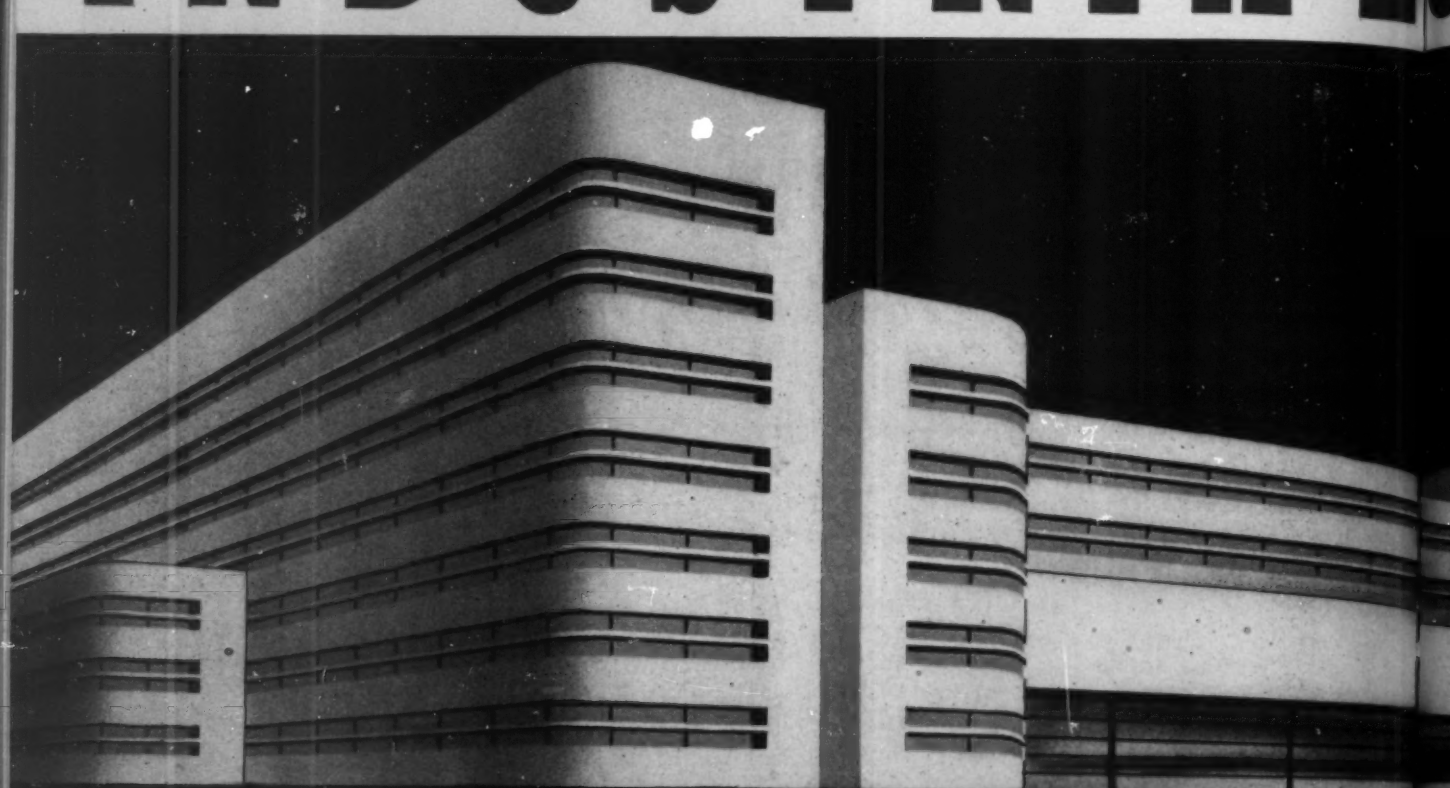
Proof of Performance? Ask for Bulletin 512, "Portfolio of Outstanding Engineering in Industrial Heating."

DRAVO HEATING



FROM 300,000 TO 4,000,000 B.t.u. PER HR.
UNITS COMBINE FOR ANY DESIRED OUTPUT

INDUSTRIA L



U.S. Postal Concentration Center in Long Island City, New York, Alfred Hopkins & Associates, New York, Architects & Engineers.

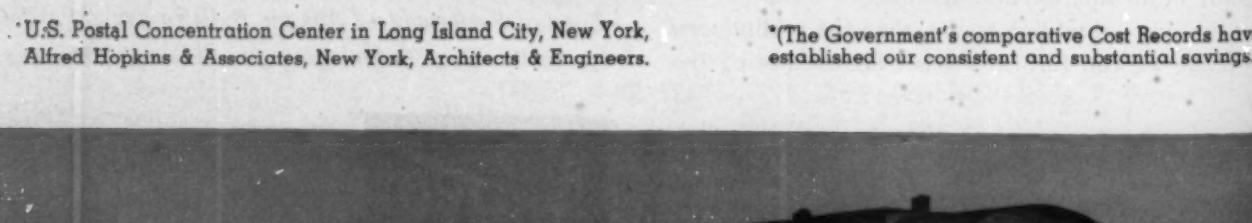
MULTIPLE UNITS • ENTIRE COMMUNITIES

With $200,000,000 in government construction contracts completed in less than three years, we are equipped for, and experienced in the erection of huge structures, multiple building groups, and entire communities including waterworks, sewerage systems and the related utilities and facilities.

INDUSTRIAL PLANTS AND CONVERSIONS

Large-scale industrial plants, extensions and conversions can be given the same precision cost and efficient construction services that saved the government months of time and millions of dollars* on critically needed, high-speed war construction projects.

*(The Government's comparative Cost Records have established our consistent and substantial savings.)

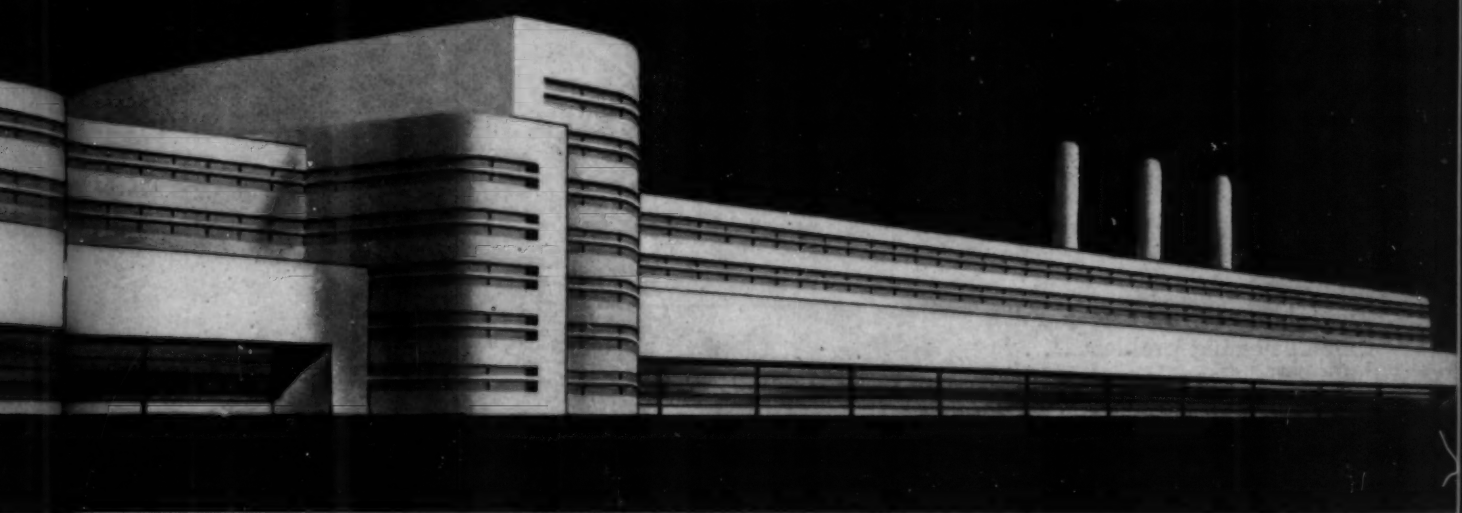


One of six 626-foot long Drill Halls at $50,000,000 Sampson Naval Training Station.

Shreve, Lamb & Harmon, Architects.

LCONSTRUCTION

Based upon the same large-scale high-speed operations that completed in less than 3 years 100 Government Projects for a total of $200,000,000



$100,000,000 WORK COMPLETED IN ONE YEAR

Working under extreme pressure, and invariably meeting or anticipating completion schedules, has perfected a technique that only a half-century of experience and the handling of $100,000,000 in construction work in 12 months could develop.

Factors in SPEED and ECONOMY are control of necessary materials—our own lumber and material yards, prefabrication subsidiary, heavy equipment & trucking organization and fast-moving personnel.

ADAPTABILITY TO LARGE OR SMALL PROJECTS

With organization and facilities for operating a dozen large projects simultaneously, the Johnson corporations and subsidiaries are also organized to handle $100,000 projects of the type Industry may now require. To such problems we give the direction and supervision that an economically operated project of this size demands.

We should be pleased to confer or submit proposals on projects from $100,000 to $50,000,000.

"A FIRM FOUNDATION SINCE 1896"

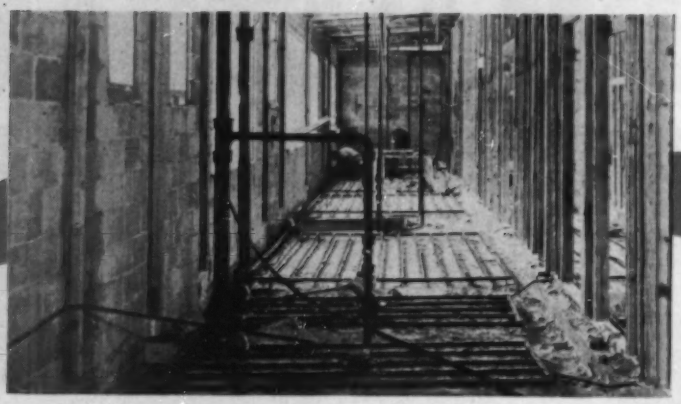
JOHN A. JOHNSON CONTRACTING CORP.

GENERAL CONTRACTORS

Brooklyn • Washington • Pemberton • Atlanta Headquarters: 270 Forty-first St., Brooklyn 32, N. Y.

Booklets "Industrial Construction" and "Looking Into The Future" will be sent on request.

Modern, extremely functional plant at Harrison, N. Y.—product education.
—Robert C. Vignola, Architect.



SPECIAL CASES HOSPITAL
NAVAL AIR STATION
JACKSONVILLE, FLA.
F. E. Markel, Mechanical Engineer
Roberts & Co., Contractors

Here's still another

HOSPITAL INSTALLATION for BYERS RADIANT HEATING

Every hospital presents a rather difficult heating problem . . . but the Special Cases Hospital at Jacksonville Naval Air Station, posed something rather special in this respect. The structure is founded on a concrete slab, which is always extremely hard to heat by ordinary means.

Byers Radiant Heating was selected to meet the condition. No debates on methods, or guesses as to results, were necessary as Byers Radiant Heating was already installed and serving in two chapels, a "Brig," and two wings of a dispensary building at the same Base.

All signs and predictions indicate that hospitals will be No. One in the post-war construction parade, and many designers feel that radiant heating will contribute greatly to increasing the efficiency, comfort, and safety of the new structures. Since the entire floor, wall, or ceiling area becomes a mild-temperature heat source, there are no exposed units to harbor dust or germs, or to create a hazard because of falls or burns. Furthermore, there are no restrictions in the placement of furnishings which can be disposed in the most efficient pattern. In some cases this may permit reduction in room size. Comfort conditions do not depend primarily on air temperature, giving wider latitude in ventilating without making them chilly.

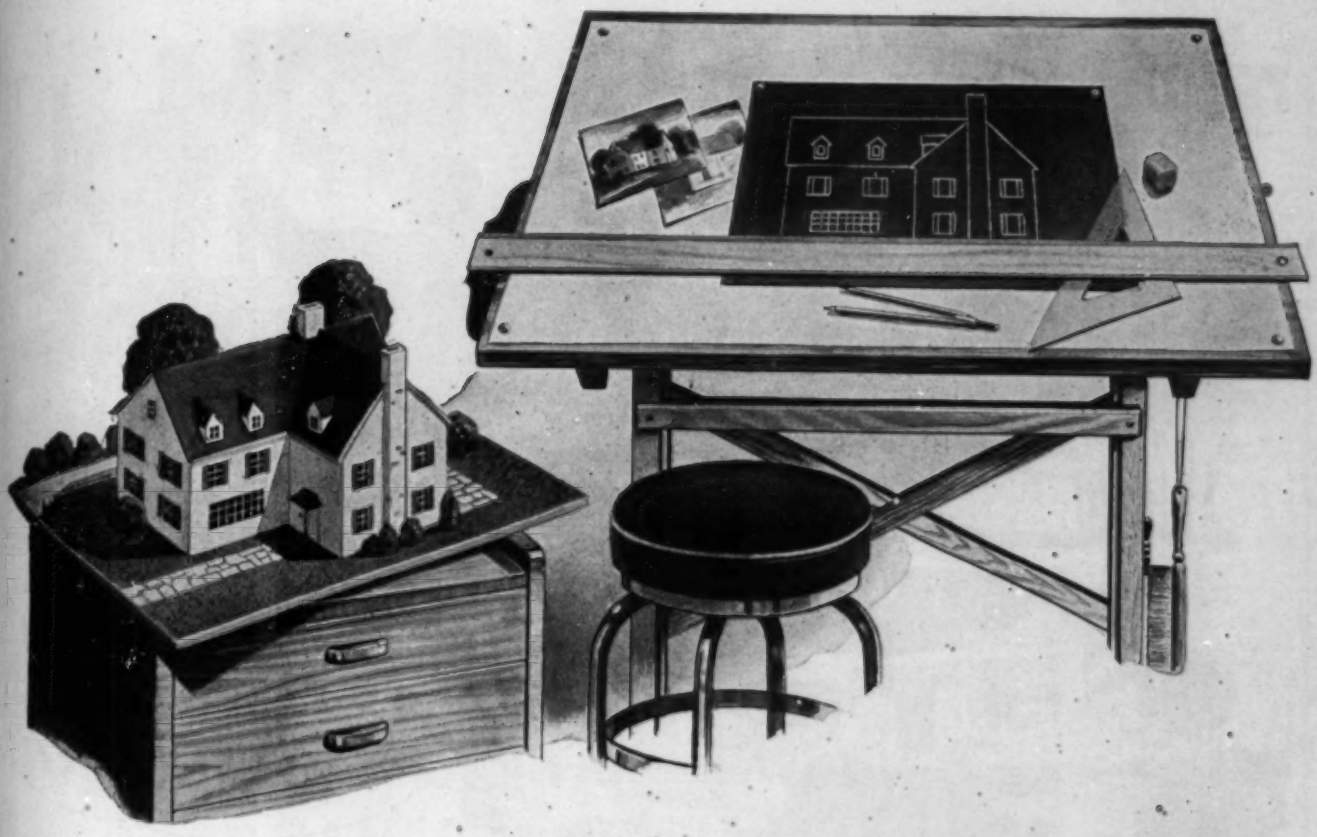
Byers Wrought Iron makes several very important contributions to radiant heating installations in hospitals. It is readily fabricated. It has high heat emission. It expands and contracts at almost identical rates with concrete and plaster, and so sets up no strains in the floors or ceilings where it is installed. And in hundreds of installations and over periods of many years, it has conclusively demonstrated its unusual durability.

If you have any hospital jobs on the board or in prospect, and would like any specific information on radiant heating, our Engineering Service Department is always at your service. You will find a complete general story on the subject in our bulletin, "Byers Wrought Iron for Radiant Heating Installations." We will gladly send you a complimentary copy.

A. M. Byers Company, Pittsburgh, Pa. Established 1864. Boston, New York, Philadelphia, Washington, Chicago, St. Louis, Houston, Seattle, San Francisco.

CORROSION COSTS YOU MORE THAN WROUGHT IRON

BYERS
GENUINE WROUGHT IRON
TUBULAR AND HOT ROLLED PRODUCTS
ELECTRIC FURNACE ALLOY STEELS · OPEN HEARTH ALLOY STEELS
CARBON STEEL TUBULAR PRODUCTS



Ever see a dream Heated?

IT's still a subject of discussion whether the postwar house will look very different from today's. But of this we are sure: it is going to be different.

We've kept a close watch, here at General Electric, on architectural trends. We've studied the ideas of architects on roofing, insulation, window design and other constructional features, with a "weather eye" to more efficient heating and cooling equipment, at lower cost to the home owner.

For in the minds of General Electric engineers, it is one thing to design "advanced" equipment, and something else to provide a practical solution for the many new problems in indoor "weather control" which the house of the future will create. It takes a lot of research to heat a dream efficiently.

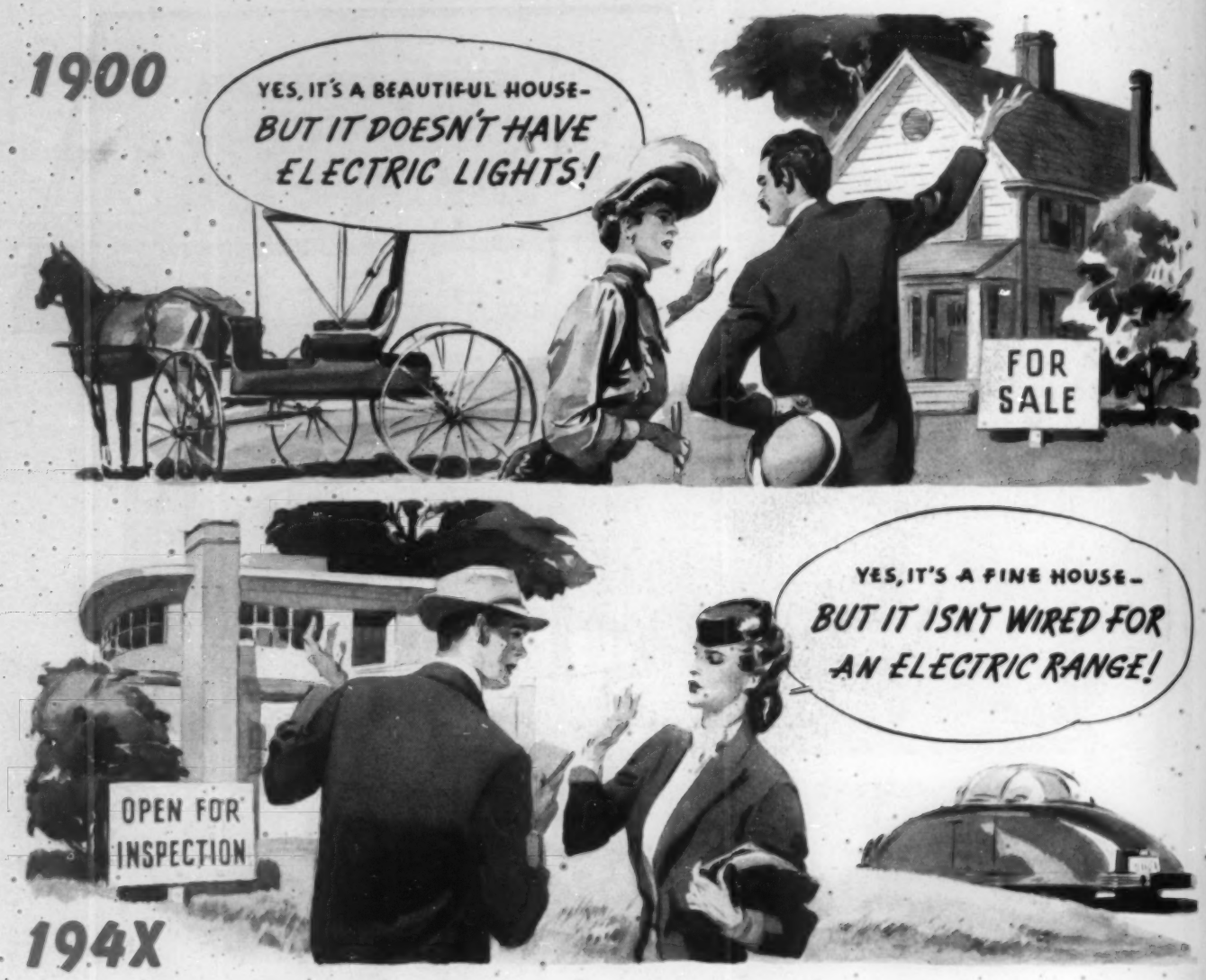
We believe you will welcome the improvements in G-E's postwar heating and air conditioning equipment, but you are going to appreciate even more the *accuracy* with which it meets your requirements.

☆ BUY . . . and hold . . . WAR BONDS ☆

General Electric Company, Heating and Air Conditioning Equipment Divisions, Section 44412, Bloomfield, New Jersey.

GENERAL ELECTRIC

Hear the General Electric Radio Programs: The "G-E ALL-G'RL ORCHESTRA," Sundays, 10 P.M., EWT, NBC . . . "THE WORLD TODAY" News, Every Weekday, 6:45 P.M., EWT, CBS



"Ever TRY to sell a woman something she DOESN'T WANT?"

Remember the old saw about "You can lead a horse to water, but you can't make him drink!"? Well, it's the same with women. If a house doesn't have what they want, they won't buy. And women now-a-days *want* the clean, convenient, safe economy of an *electric range*.

Here are the Facts!

- In 1941, ten times as many consumers demanded Electric Ranges as in 1933. The trend is rapidly towards Electric Cooking.
- The OFFICE OF CIVILIAN REQUIREMENTS recent survey showed that 2.7 times as many families wanted an Electric Range as now own one.
- The large and rapidly growing swing to Electric Cooking is also shown in surveys made by HOUSEHOLD MAGAZINE, THE J. WALTER THOMPSON COMPANY, THE CHICAGO TRIBUNE, and others.
- The additional cost of wiring for an Electric Range *adds less than 12c a month* to payments on a 20-year F. H. A. Loan! Get the details—now! Write for FREE booklet, "WIRE AHEAD." Address:

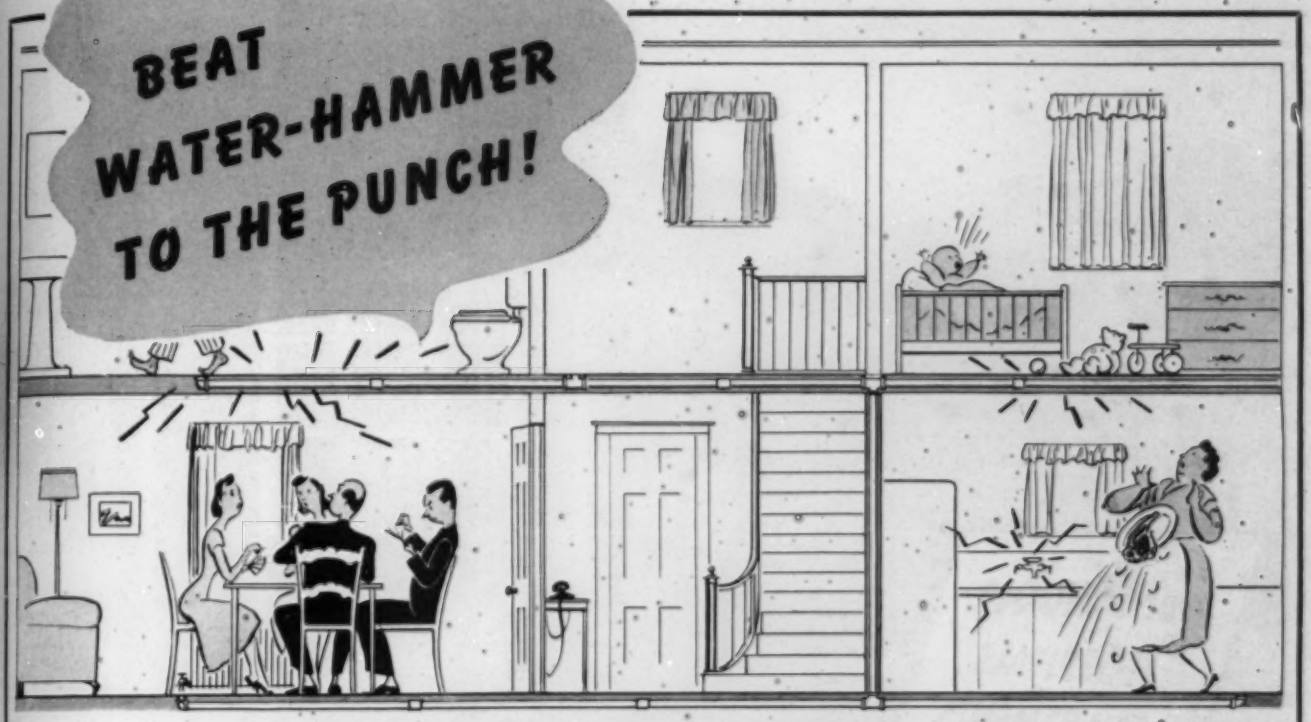
ELECTRIC RANGE SECTION
NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
155 E. 44th Street, New York 17, New York

A-B STOVES • ADMIRAL • ELECTROMASTER • ESTATE • FRIGIDAIRE • GENERAL ELECTRIC • GIBSON • HOTPOINT • KELVINATOR • MONARCH • NORGE • QUALITY • UNIVERSAL • WESTINGHOUSE

THE RANGE SERVICE OUTLET

A SYMBOL OF THE MODERN POST-WAR HOME

FOR EASIER SALES
wire your houses
FOR ELECTRIC RANGES



GENERAL WATER HAMMER SILENCER

It's easy to beat the noisy, wearing wallop of water-hammer – just install *GENERAL* Silencers. These modern scientifically-designed Water-Hammer Silencers put a *permanent* stop to noise and destructive vibration in any plumbing system.

The Diaphragm Does It

A non-corrosive diaphragm in this engineered unit absorbs the shock of pressure when valves or faucets are suddenly shut off. *GENERAL* Water-Hammer Silencers have no makeshift air chamber to become water-logged! Equally effective on rigid pipe or copper tubing . . . ruggedly built . . . permanently leak-proof. In addition, you'll find they can be easily adjusted to any water pressure . . . and that means they'll check water-hammer in any system. *GENERAL* is the only silencer with all these advantages . . . yet actually costs less!

Stop Water Hammer For Good

Recommend and install these proven Silencers . . . They stop criticism of noisy plumbing jobs for good! Write for Catalog 16, containing details on these effective, low-cost Silencers and other heating and plumbing specialties, by: General Fittings Company, Dept. C, 123 Georgia Ave., Providence 5, R. I.

GENERAL Water-Hammer Silencers —made in 2 sizes, for hot or cold water lines from ½" to 2" capacity.

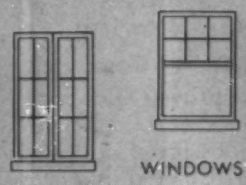
GENERAL

WATER HEATERS AND HEATING SPECIALTIES

- Tankless and Tank-Type Water Heaters for Industrial Plants — Apartment Houses — Homes
- Coil-Heated Tanks
- Live-Steam Heaters
- Pipe Unions
- Thermostatic Mixing Valves
- Built-in Water Heaters for Boilers

for SCHOOLS
HOSPITALS
APARTMENTS
OFFICE BLDGS.

PARK SCHOOL, OSSINING, N.Y. FREDERICK MATHESIUS, *Architect*



WINDOWS

REVOLVING DOORS

ARCHITECTURAL METALWORK

TABLETS

STATUARY

Tomorrow's WINDOWS will be ALUMINUM!

Tomorrow more schools, hospitals, apartments and office buildings than ever will have aluminum windows.

Smart-looking aluminum windows by General Bronze will help keep your new building "modern" looking for years to come. Their neutral color blends harmoniously with any building material. Their weather-tightness, ease-of-operation and low maintenance costs are sure to be appreciated by your most exacting clients.

Before your present plans get too far along, we suggest that you investigate General Bronze's line of aluminum windows. As the largest producer of non-ferrous windows before the war—and with newly enlarged facilities available after the war, General Bronze will be in a position to give you the finest in windows—either aluminum or bronze—double hung, casement, or projected—at prices that will make them a "must" for every building. For complete information on General Bronze products consult Sweet's or write for the name of our nearest representative.

GENERAL BRONZE
CORPORATION

34-19 TENTH STREET LONG ISLAND CITY, N. Y.

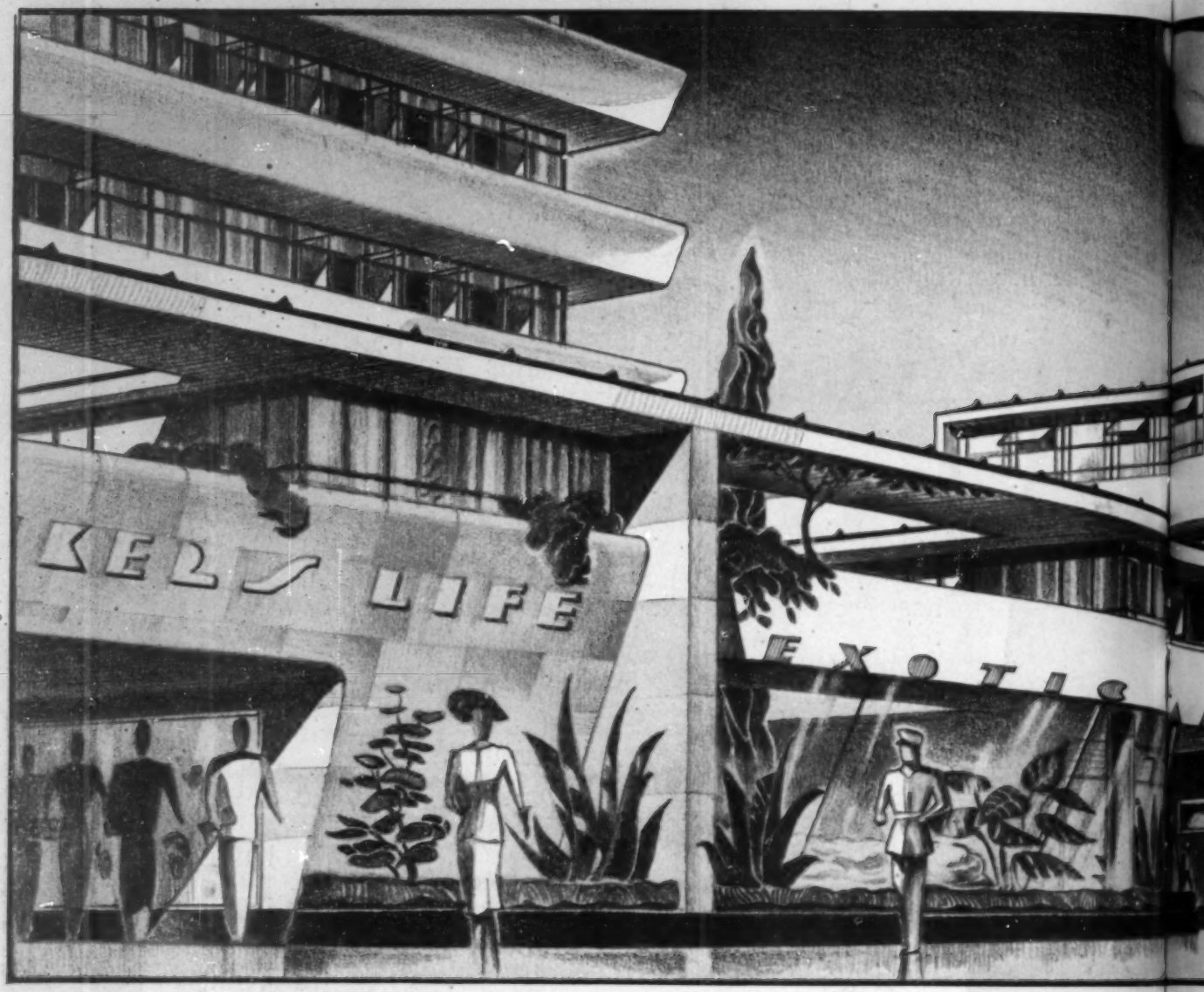
FIVE CONSECUTIVE ARMY-NAVY "E" AWARDS

As the first Christmas marked the dawn of a new era . . . tradition now makes it a welcome time for remembering our past associations in the light of present knowledge and the shaping of our future course by the experience we have gained. As we express our deep appreciation of your friendly confidence and good will we also extend the season's heartiest greetings with the sincere wish that Health, Happiness and Prosperity be yours during the coming year.

BETTER WALLS • WITH AR-KE-TEX CERAMIC GLAZED STRUCTURAL TILE

AR-KE-TEX
ART-KERAMIC-TEXTURES

ARKETEX CERAMIC CORPORATION • BRAZIL, INDIANA



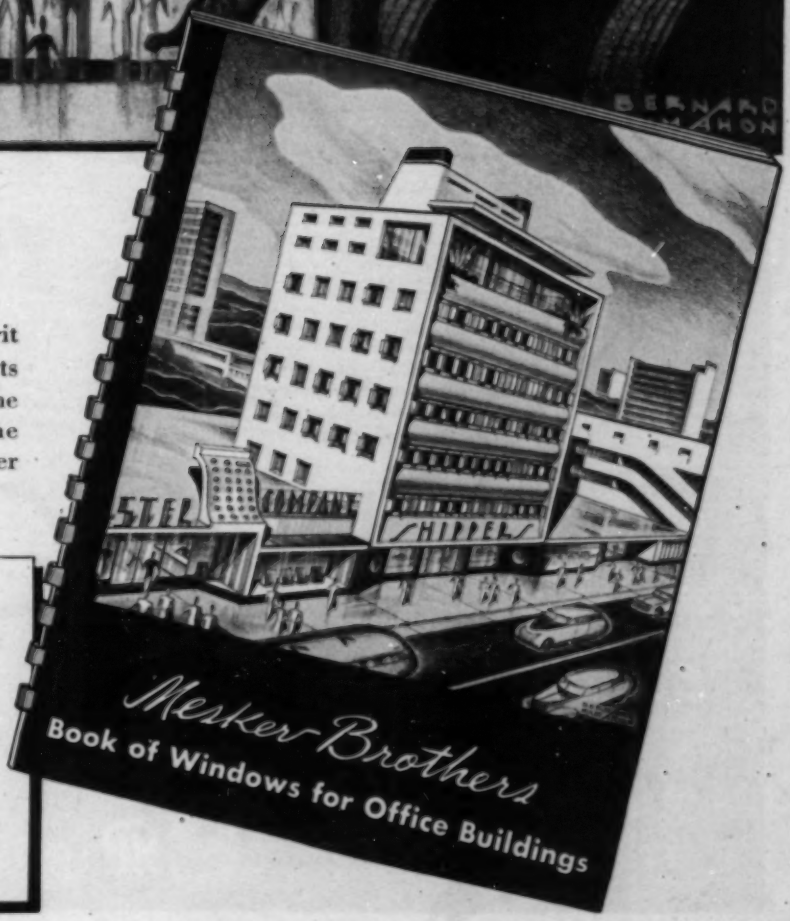
DESIGNING POST-WAR OFFICE B

Then by all means write for your free copy of the Mesker Brothers Book of Windows for Office Buildings. Not at all like the customary "catalog", this book is an architectural clearing house of new window treatments, ideas and improvements of modern designs. Written in the language *of architects*, it is illustrated by a well known architect, and is filled with useful pencil renderings of inestimable value in the designing of post-war office buildings.

This book is yours for the asking. But since paper shortage limits quantities, requests will be filled in the order they are received. So reserve your copy TODAY, by mailing the coupon *now*. There is no obligation.

BUILDINGS?

The Mesker Brothers "Merit Meter", based on sworn facts from Sweets Catalog, has time and time again proved the quality supremacy of Mesker Steel Casements.



MAIL THIS COUPON TODAY

MESKER BROTHERS, Dept. R-124, 428 S. 7th St., St. Louis 2, Mo.

Without cost or obligation, mail me your Book of Windows for Office Buildings.

Architect _____

Address: _____

(Give Street Number or P. O. Box No.)

City _____ State _____

AR-124

Manpower shortages prohibit establishing a permanent mailing list.

OFFICE BUILDINGS

OWNER . . . MERCANTILE NATIONAL BANK CORP.; ARCHITECT . . . WALTER W. AHLSCHLAGER
CONTRACTOR . . . HENSEL CONSTRUCTION CO. ALL OF DALLAS, TEXAS.

Q-FLOORS

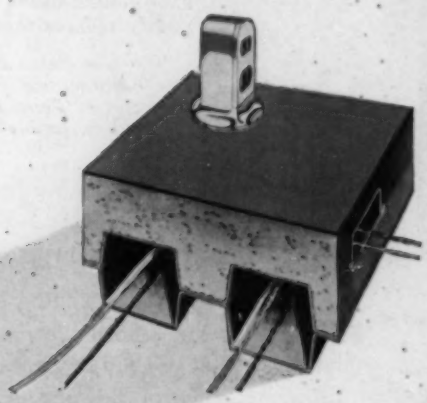
H. H. ROBERTSON CO.

2404 FARMERS BANK BUILDING
PITTSBURGH 22, PENNSYLVANIA

OFFICES IN 45 PRINCIPAL CITIES
WORLD-WIDE BUILDING SERVICE

SPECIFICATION:

Client to rearrange partitions and electrical outlets after occupancy.



Q-Floors enable you to assure clients that electrical outlets, lights and partitions can be easily relocated as often as changing conditions dictate.

From the architect's point of view, this avoids some of the worst headaches in the business.

Q-Floors are constructed so that an electrician can drill anywhere, anytime and set up electrical outlets six inches apart. A new outlet takes only a few minutes, requires no trenches, no muss or fuss.

A building with Q-Floors is ready for any electrical emergency the day it is completed and as long as it lasts. Floor plans remain fluid. Changes can be made *quick*. Q-Floors help keep a building in pace with increasing mechanical demands.

Structurally, Q-Floors have advantages, too.

No wet materials hold up progress; no shoring, no forms. Two men can lay 32 square feet of Q-Floor in thirty seconds. The installation is quiet, clean, fireproof. The Q-Floor immediately becomes a working platform for all other trades. The floors can be completed almost as soon as the structural frame, which, incidentally can be lighter, because Q-Floors are light in weight. All these factors contribute to reducing building time from 20 to 30%.

And there are still other favorable factors —cost for one. Despite the immediate and continued advantages of Q-Floor, cost stacks up well with "average appropriation". For detailed information write for Q-Floor literature, or a Robertson representative will gladly call on you. Electrical Fittings for use with Robertson Q-Floors are available through General Electric construction materials distributors.

THE EASIEST THING FOR A BUILDER TO FORGET—
Floors are what a building is for

An Architect's Post-War View

LEE SCHOEN is a member of Eugene Schoen & Sons, a long-established architectural firm of New York, who have designed such buildings as the Nathan Mfg. Co. Plant (now N. Y. & Queens Light & Power Co. in Flushing, L. I.); Simplex Automobile Plant in New Brunswick, N. J.; Amity St. Synagogue in Flushing, L. I.; and interiors for the Center Theater, Rockefeller Center, N. Y. Mr. Schoen recently provided for a number of domestic Petro Burners in a group of five dwellings for the Philwold Estate in St. Joseph, New York.

of industrial and dwelling advantages in

PETRO OIL BURNING SYSTEMS

From experience Mr. Schoen comments on the Petro Oil Burning Systems he has used:

"Under the head of heating-cost we include both fuel cost and labor expense for maintenance and repair. Substantial proof of the heating-cost economy of Petro Systems lies in the fact that, in our opinion, they provide a ceiling on fuel costs because of their combustion efficiency, while their operation eliminates labor costs in the automatic systems and greatly reduces them in the semi-automatic systems.

"We like Petro Burners and our clients like them. In post-war building we fully expect that liquid fuel and the contribution of Petro will continue in helping in the solution of the heating problems for our industries and our homes."

Mr. Schoen's projects have been so varied in size and nature that his evaluation of Petro equipment comes from experience with both domestic and industrial types and various sizes of equipment in those types.

When such varied operating experience and observation leads to conclusions like Mr. Schoen's, it must be evident that all Petro equipment is designed, produced, and installed according to definite principles which insure economies of fuel and maintenance.

There are Petro burners and complete heating units which have a firing rate of as little as one gallon per hour of light, "domestic" fuel oil, and others conservatively rated up to 145 g.p.h. of fuel oil so heavy that it requires pre-heating. But all of them have the basic Petro characteristics of economy in fuel, labor and maintenance, with an unusually long operating life.

Petro equipment is designed primarily to deliver the fuel economy which causes most buyers to install oil firing. But, secondly, Petro has developed through decades, a mechanical simplicity and basic strength in its equipment to deliver the plus values of easy, inexpensive upkeep. The resultant over-all economies produce the enthusiastic satisfaction of owners and operators of Petro systems, large or small.

INDUSTRIAL MODELS
#5 or #6 fuel oil—manual, semi- or automatic operation—8 sizes to 450 bhp. "Thermal Viscosity" preheating.

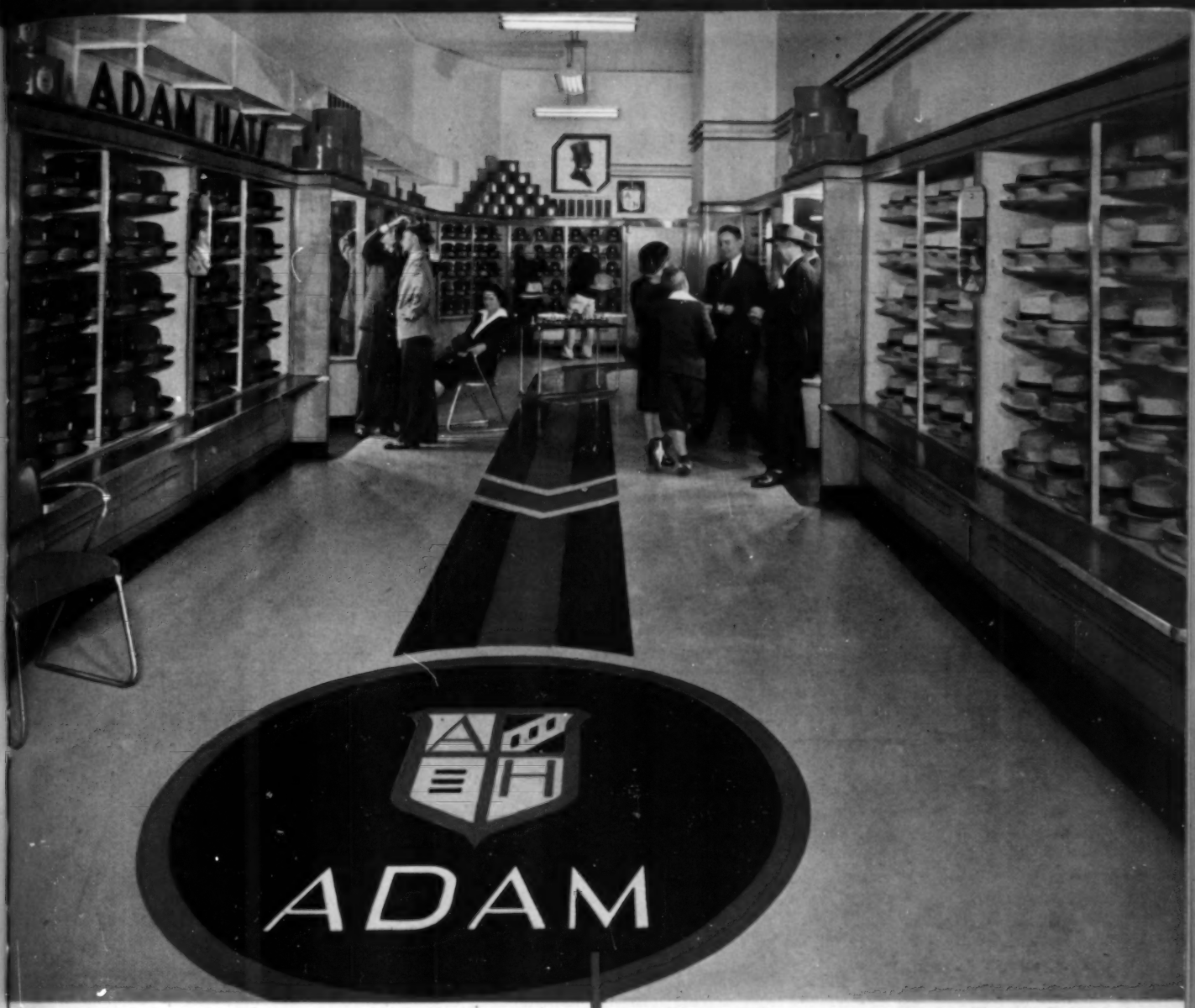
PETRO
Cuts Steam Costs

DOMESTIC MODELS
#3 or lighter oils—"conversion" and combination-unit types—7 sizes "Tubular Atomization" (patented)

Full data on Petro Industrial Burners are in Sweet's—or Domestic Engineering — catalog files. Details on Petro Domestic burners available in separate catalog. Copy of either sent gladly on request.

PETROLEUM HEAT AND POWER COMPANY

STAMFORD ***Makers of good Oil Burning Equipment since 1903*** **CONNECTICUT**



Here's the modern, long-wearing floor for busy shopping centers . . .

Management, salesmen, and customers all appreciate the long wear, the cleanliness, the resilience, the ease-under-foot, and the attractive appearance of this cleverly designed Nairn Linoleum floor in the Adam Hat Store in Dallas. Colorful, readily "personalized" or decorated for any desired effect, Nairn Linoleum offers most intriguing possibilities to the architect or designer. And its well-proved wear-resistant qualities insure long, trouble-free, and economical service, even in areas of heaviest traffic. A handbook on linoleum specifications has been prepared for your use. May we send you your copy? CONGOLEUM-NAIRN INC., KEARNY, N. J.

For modern floors and walls

NAIRN LINOLEUM

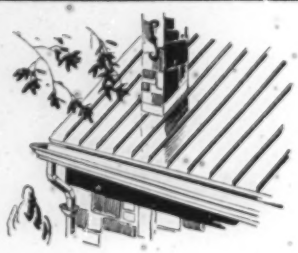
easy to maintain,
colorful, permanent, resilient

HERE ARE SIX REASONS WHY

Many Architects are Planning Now to Use Stainless Steel in Postwar Building

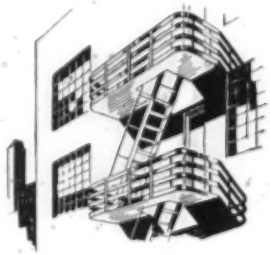
1. APPEARANCE

The gleaming surface of stainless steel is attractive for exterior and interior trim, and in fixtures, elevators, and doors. The simple beauty of this metal makes it a first choice where appearance is to be considered.



2. DURABILITY

The beautiful appearance is permanent, unaffected by atmospheric corrosion. Stainless steel equipment should outlast the building itself.

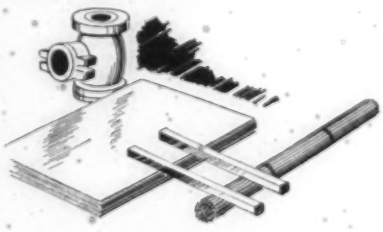


3. STRENGTH

So great is the strength of stainless steel that even light gages have considerable strength. There is no danger of weakening through corrosion.

4. EASE OF FABRICATION

Stainless steel can be fabricated by all the common methods, such as forming, machining, forging, punching, stamping, and it is readily welded.



5. MANY FORMS

Different types of stainless steels are available in sheets, plate, strips, seamless and welded tubing, bars, wire, cable, and a variety of structural shapes.

6. MINIMUM MAINTENANCE

Simply washing the surface periodically with soap and water and using a cleanser recommended for stainless steel will keep the surface bright for years.

HERE ARE A FEW APPLICATIONS OF STAINLESS STEEL:

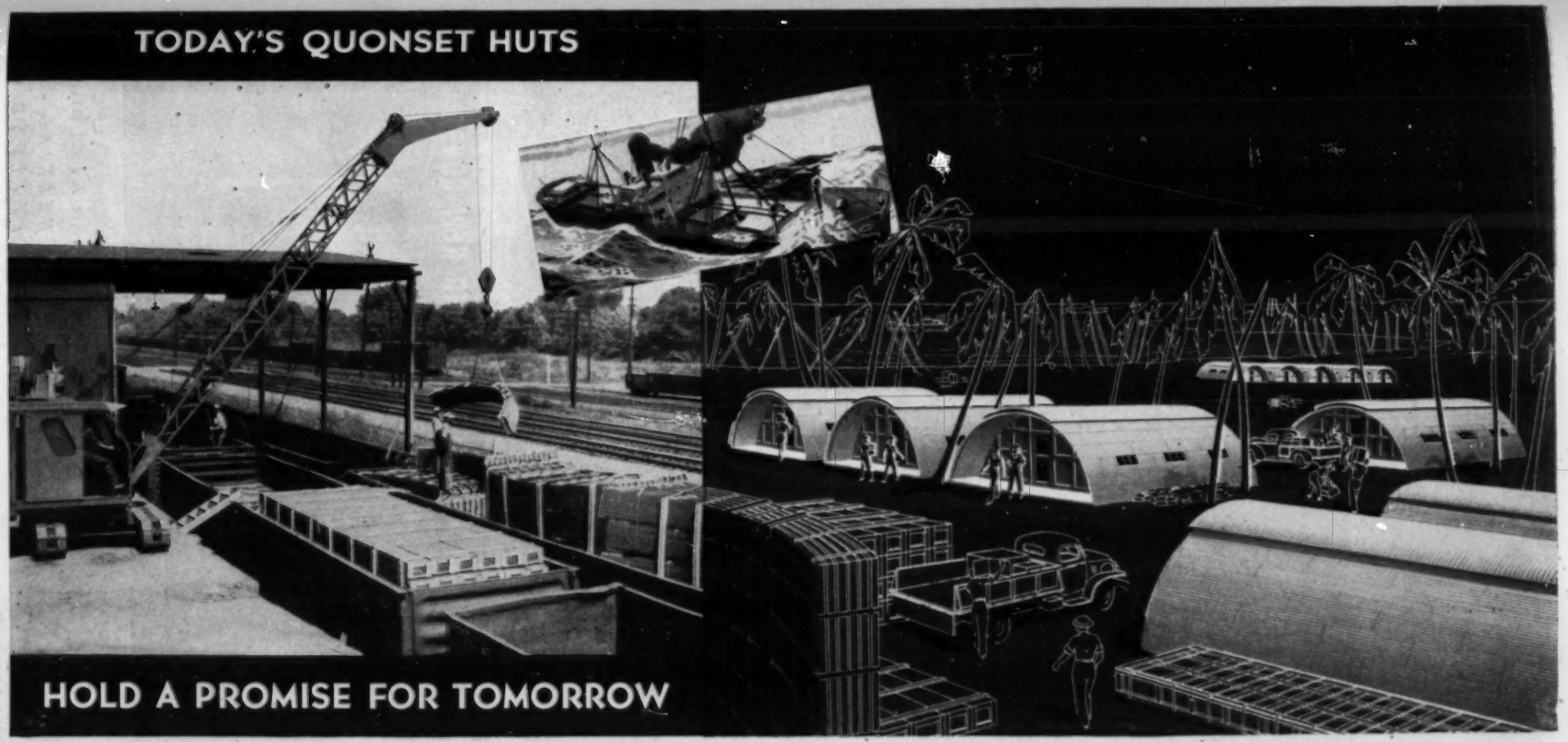
- Bath fixtures
- Doors and frames
- Exposed piping
- Exterior sills
- Exterior ornamental metal
- Fire escapes
- Firewalls
- Food service equipment
- Fountain service equipment
- Hardware
- Interior ornamental metal
- Kick plates for doors
- Lighting fixtures
- Roof accessories
- Screen doors and mesh
- Spandrels
- Stitch plates
- Ventilating louvres
- Windows
- Wire hangers (for suspended metal lath ceilings)

Electromet
Trade Mark
Ferro-Alloys & Metals

Although Electro Metallurgical Company does not make steel of any kind, it does make available to steel makers many alloys which give new properties to and improve the quality of steel. The basic research of this company means new useful metallurgical information and better metals. If you have a problem concerning the architectural uses of stainless steels, consult us without obligation.

ELECTRO METALLURGICAL COMPANY
Unit of Union Carbide and Carbon Corporation
30 East 42nd Street UCC New York 17, New York
In Canada: Electro Metallurgical Company of Canada, Limited
Welland, Ontario

TODAY'S QUONSET HUTS



Manufacturer of the U. S. Navy's Famous **Quonset Hut**

Familiar sight at American military bases all over the world is the U. S. Navy 20′ x 56′ steel arch rib Quonset Hut and its big brother, the 40′ x 100′ arch rib warehouse, both made by Stran-Steel and shipped ready for quick assembly in the field. No other material can match the efficiency of Stran-Steel framing on this vital assignment. ¶ The opportunities for adapting Stran-Steel's efficiency and design to construction in the future are limitless. Stran-Steel's war-learned experience will be of high usefulness to architects and engineers. Investigate Stran-Steel nailable joists and members for a permanent, fire-safe framing system for homes, apartments and light industrial buildings. Stran-Steel's flexibility in use affords wider latitude in design—opens up promise of better construction methods tomorrow.

STRAN-STEEL

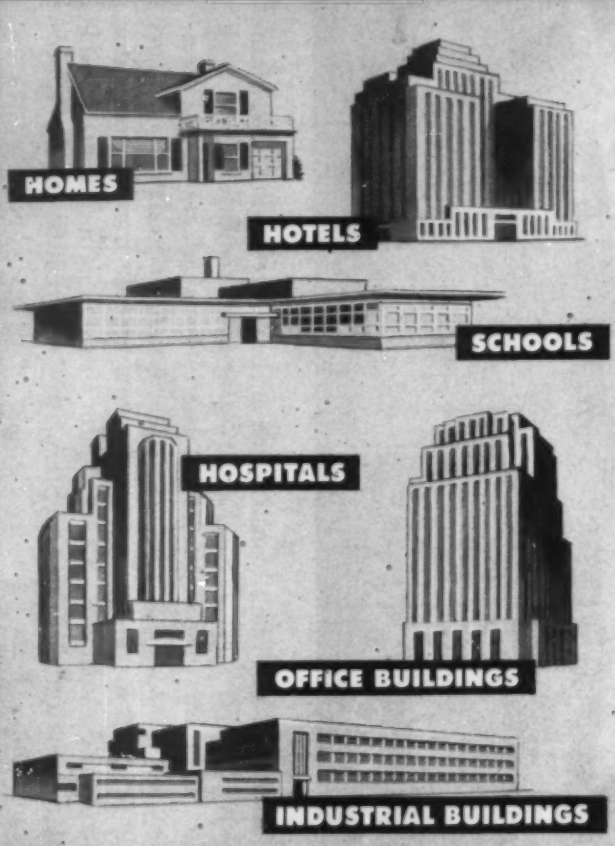
DIVISION OF

GREAT LAKES STEEL CORPORATION

PENOBSCOT BUILDING, DETROIT 26, MICHIGAN

UNIT OF NATIONAL STEEL CORPORATION

Crane plumbing for the construction you are planning



TODAY, on the boards of America's architects are designs for residences and public buildings—schools and hospitals—hotels and industrial plants. This construction will require a vast amount of sanitary equipment.

The Crane line of plumbing equipment in the future, as in the past, will include a wide variety of plumbing fixtures specifically designed to meet the needs of every type of structure.

In this line you will find new designs and new improvements that Crane engineers have developed and which have proved practical. This equipment will continue to possess the same high quality and the same sturdy reliability that have always been associated with the name Crane.

Call your Crane Branch for specific information, dimensions and suggestions for sanitary equipment on the plans on which you are working.

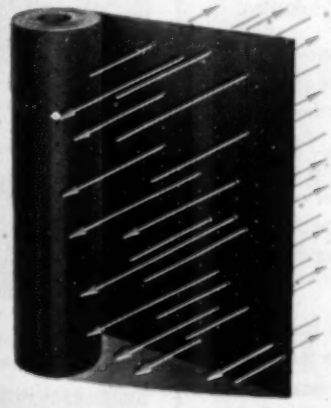
CRANE FIXTURES AVAILABLE TODAY FOR MODERNIZATION AND NEW CONSTRUCTION

CRANE

CRANE CO., GENERAL OFFICES: 836 S. MICHIGAN AVE., CHICAGO 5

PLUMBING • HEATING • PUMPS
VALVES • FITTINGS • PIPE

NATION-WIDE SERVICE THROUGH BRANCHES, WHOLESALERS, PLUMBING AND HEATING CONTRACTORS



Pin-point perforations form "Inlet" and "Outlet" Valves . . . vapor escapes through perforations and so prevents roofs from blistering and buckling.

THE "Double Valve" action of Ruberoid Air-Vent* Felt averts many annoying roof failures. Air, trapped under roofing, expands with the sun's heat, causing blisters that bulge and lift. Patented Air-Vent Felt has pin-point perforations—punched alternately from top and bottom—that form "Outlet" and "Inlet" valves. When Air-Vent is laid, the air or vapor beneath is forced out through these tiny "Outlet" valves. Asphalt seeps through the "Inlet" valves giving a better bond between the layers of felt. Result: freedom from blister problems . . . no air bubbles to expand and lift the felt from below.

*PAT. NO. 2096784

Ruberoid Makes the Right Roofing For *Any* Type of Roof

You're not limited to one type! Ruberoid makes all four popular types of built-up roofing materials: Asbestos Felt and Asphalt, Tarred Felt and Coal Tar Pitch, Asphalt Felt and Asphalt, also combination roofs of Asphalt Felt, Asbestos Felt and Asphalt. Ruberoid provides a complete line of built-up roofing specifications . . . included are roofs, which when applied by Approved Roofing Contractors, are guaranteed for 10, 15, or 20 years, depending upon specifications used. Specify RUBEROID . . . the roofing that gives you freedom of choice!

The RUBEROID Co. *Executive Offices:* **500 Fifth Ave., New York 18, N. Y.**
ASPHALT AND ASBESTOS BUILDING MATERIALS . . . THERMAL INSULATIONS

RUBEROID
PERFORATED
AIR-VENT FELT

[Since 1795]

Quality is made up of such a lot of things

That is why BIRD has developed CONTROLLED PRODUCTION for all building materials

TAKE A CLOSE LOOK at that picture above. It shows not only a better building product, but a better method of application . . . a whole roof-building story made possible by Bird's exclusive method of Controlled Production.

For Bird Paroid is unlike most Smooth-Surface Roll Roofings. Consider the surface first...it's coated with a special Asbestine Talc. This bright gray talc stays bright, and completely covers the water-proofing beneath. Flat and flaky, it effectively deflects the damaging ultra-violet rays of the hottest tropical sun. The size, quality and character of this talc were determined and rigidly checked by Controlled Production.

Beneath this special talc is a base built from the finest dry felt, produced in Bird's own felt plant. This felt is thoroughly saturated with waterproofing asphalt to well exceed Underwriters' Laboratory specifications. The saturated base is then given an extra heavy coating of waterproof asphalt. And every step in this complicated process is carried forward through completely Controlled Production.

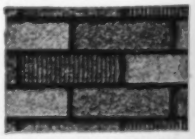
But Bird wasn't satisfied with just a better product. The best roofing is only as good as its application. So Bird developed a wind-and-weatherproof application — the Double Lock method . . . first with nails, safely concealed by an overlapping course, and then with Bird's exclusive Quick-Set cement, produced in Bird's own plant. This cement is so tough, so binding that the joints become even stronger than the material itself.

Few, indeed, of the many big-name corporations that use Bird Paroid roofing realize the endless attention to details that alone has made this splendid product possible. But from the jungles of Brazil to the distant Philippines, reports all prove that Paroid stands up, when ordinary roll roofings deteriorate under extremes of sun and weather. Again Controlled Production can be credited with another quality product that has made the name of Bird famous for 150 years wherever Better Building Materials are specified.

Other examples of Controlled Production:

BIRD MASTER-BILT Shingle—rich in texture and color, thick butts for extra protection.

BIRD TRI-TAB HEX Shingle—colorful, draft-free—wind-resistant.



BIRD INSULATED SIDING, in many attractive brick tones.

FOR HOMES

ASPHALT SHINGLES · INSULATED SIDINGS
INSULATION BOARDS · FLOOR COVERINGS
WALLBOARDS · BUILDING PAPERS

BIRD Roofing Products

SINCE 1795

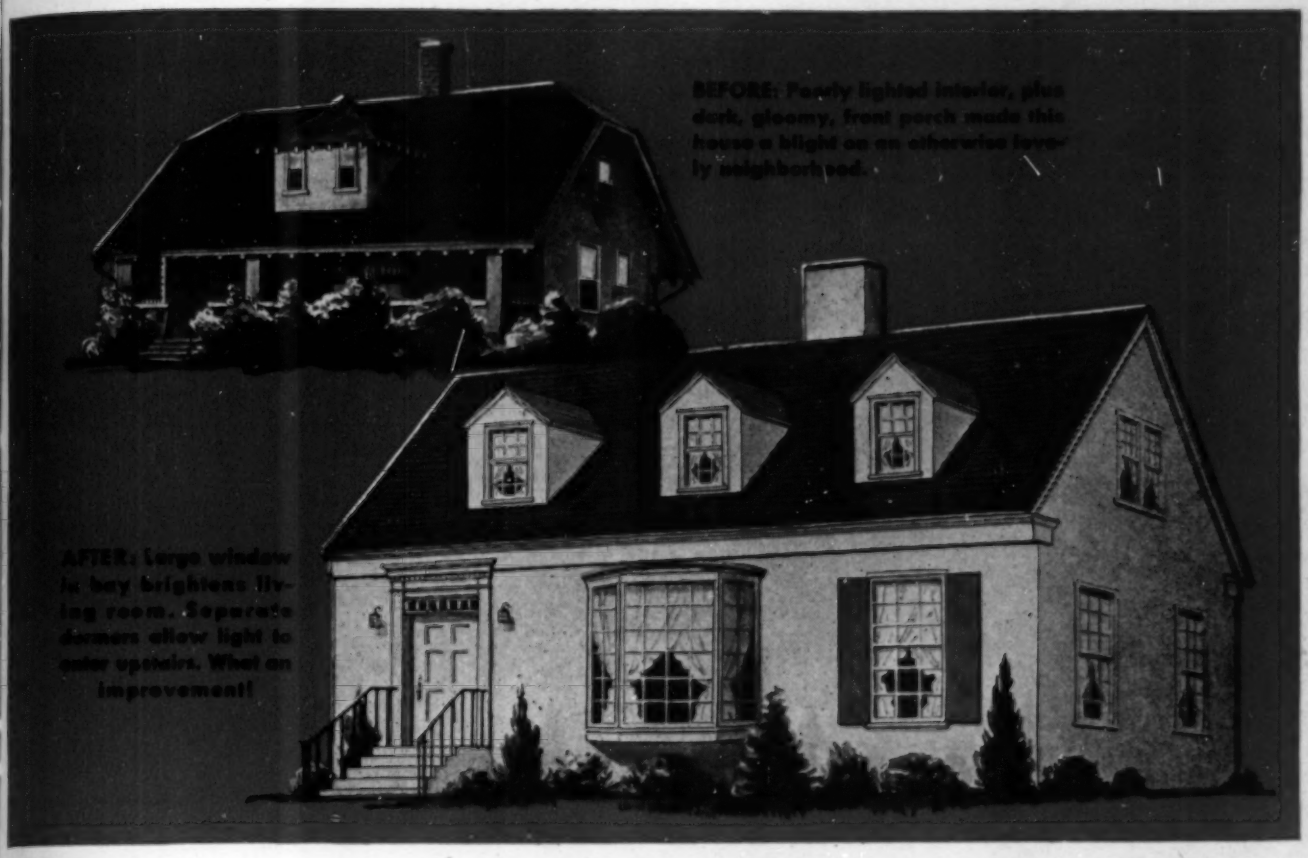
Men who know the best know

BIRD

FOR INDUSTRY

RUBBERLIKE FLOOR RUNNERS · INDEX PRESSBOARDS · SHIPPING CONTAINERS
SHOE CARTONS · BUILT-UP ROOFS
BIRD-FIBRE WOOD FRAME CASES

Bird & Son, Inc. · East Walpole, Mass. · New York · Shreveport, La. · Chicago, Ill.


BEFORE: Poorly lighted interior, plus dark, gloomy, front porch made this house a blight on an otherwise lovely neighborhood.
AFTER: Large window in bay brightens living room. Separate dormers allow light to enter upstairs. What an improvement!

REMODELING MEANS MORE THAN JUST *"Face-Lifting"!*

Here's How You Can Add Real Liveability *to the Homes You Remodel*

There's nothing that contributes so much to long lasting liveability as clean, comfortable, automatic heating. Without modern heating, the conveniences of all the "face-lifting" in the world can't provide the kind of solid living comfort that makes for satisfied home owners.

Janitrol Gas-Fired Heating Equipment is especially adaptable for home remodeling. Compact, highly efficient units, attractive in appearance, Janitrol Gas Equipment can be installed practically anywhere . . . in basements, attics, utility rooms, even in the living rooms of apartment buildings. Where room sizes are changed, room additions made, or partitions erected, Janitrol's complete line of equipment makes it possible to select an ideal unit for the changed heating requirements.

Most important, design of the home need not be *limited* by bulky, antiquated heating systems. Janitrol's adaptability lets you plan modern home arrangement from a standpoint of beauty and convenience, rather than warping remodeling plans to fit an outdated heating plant.

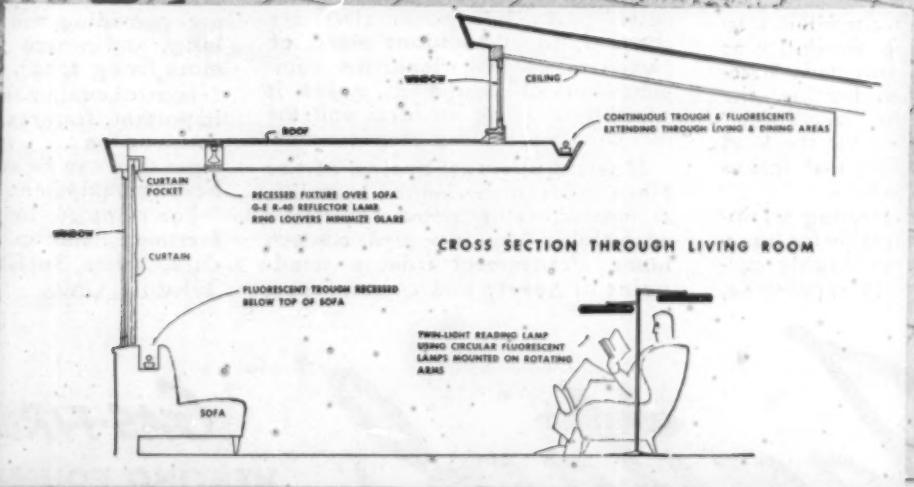
When you recommend Janitrol Equipment, you're recommending *proven performance.* In thousands of homes, apartments, and business establishments all over the country, Janitrol is assuring better gas heating, providing the utmost in liveability, and where necessary, giving more living space.

Janitrol equipment combines more important features in design and construction . . . more user advantages than can be secured with other heating equipment.

For complete information on performance, and model specification data, write Surface Combustion, Toledo 1, Ohio.

Janitrol GAS-FIRED HEATING EQUIPMENT

lighting


WINDOW
CEILING
CONTINUOUS TROUGH & FLUORESCENTS EXTENDING THROUGH LIVING & DINING AREAS
ROOF
CURTAIN POCKET
RECESSED FIXTURE OVER SOFA G-E R-40 REFLECTOR LAMP RING LOUVERS MINIMIZE GLARE
WINDOW
CURTAIN
CROSS SECTION THROUGH LIVING ROOM
FLUORESCENT TROUGH RECESSED BELOW TOP OF SOFA
TWIN-LIGHT READING LAMP USING CIRCULAR FLUORESCENT LAMPS MOUNTED ON ROTATING ARMS
SOFA

G-E MAZDA LAMPS

GENERAL ELECTRIC

. . . planned to serve

FOR TOMORROW'S HOME

With the belief that new ideas can be helpful and stimulating, GENERAL ELECTRIC brings you another in its series of postwar lighting perspectives by leading architects and designers. Here G-E brings you a different view of home lighting by designer G. McStay Jackson, Chicago.

"Let's make lighting effects *practical,*" says Mr. Jackson.

"For lighting the postwar home, why not combine pleasing beauty and practical help for eyes?

"In sketching our ideas on lighting for the various rooms of a moderate-priced postwar home, that is exactly what we have tried to do. We have provided the kind of lighting which we felt was *appropriate to serve the needs of the home-owner.*

"For instance, in the living room, we suggest several applications of fluorescent lighting, using built-in prefabricated fixtures for overall light, with concealed spotlights in the ceiling over the couch for reading light. A two-armed portable lamp using the new circular fluorescent lamps could provide light for close work in easy chairs.

"A similar lighting approach to other rooms will truly create a home for better, happier living."

A colorful new booklet, "Lighting planned to serve" reveals designer Jackson's decidedly helpful ideas on home lighting for tomorrow. For your copy, write General Electric Company, Dept. 166 PP-12, Nela Park, Cleveland 12, Ohio.

THE CONSTANT AIM OF G-E LAMP RESEARCH

IS TO MAKE G-E LAMPS *Stay Brighter Longer*

Hear the General Electric radio programs: "The G-E All-Girl Orchestra", Sunday 10 p.m. EWT, NBC; "The World Today" news, every weekday 8:45 p.m. EWT, CBS.

BUY WAR BONDS AND HOLD THEM

PANEL HEATING FOR THE POST-WAR HOME

Radiant Heating Provides Comfort Despite Extensive Use of Glass

The use of large glass areas in modern residential construction poses an important heating problem. To provide maximum livability a form of heating must be used which will assure complete comfort at reasonably low air temperatures.

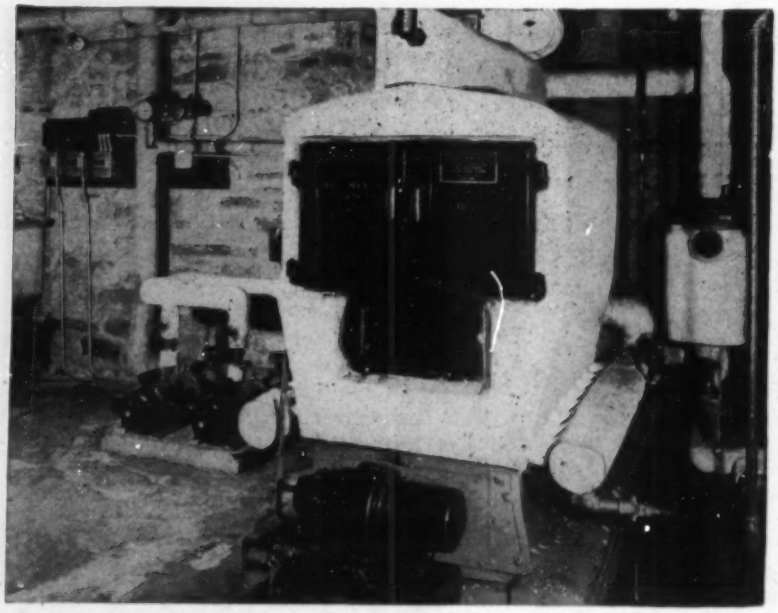
Architect Ralph Pomerance, now an Army Officer, solved this problem in his own home, recently built in Cos Cob, Conn., by using radiant heating. As a result air temperatures of 70° are quite high enough in even the most exposed rooms. With conventional forms of convected heat, it would be necessary to maintain air at nearly 80° to offset the low temperatures of the glass surfaces.

HOW TO HANDLE HEAT GENERATION FOR RADIANT HEATING SYSTEMS

A booklet just published by H. B. SMITH is a must for architects, engineers, and contractors who are interested in the generation as well as the distribution elements of panel heating systems.

For your free copy just write to THE H. B. SMITH CO., INC. 50 MAIN ST., WESTFIELD, MASS.

H.B. Smith
CAST-IRON BOILERS



HEAT GENERATION PROBLEM SOLVED: Wolff and Munier of New York City, radiant heating pioneers in the United States, designed and installed the entire system. An H. B. SMITH No. 240 Mills oil burning water tube boiler was selected because of its unusual flexibility of operation. Water in the boiler is maintained at 160° which is mixed with the return water to maintain temperatures of from 110° — 130°, depending on requirements determined by a conventional, outdoor-indoor control.

First National Bank Building, Oklahoma City, Oklahoma
Architects: Weary & Alford Co., Chicago

"After thirteen years of service, we are indeed pleased with the aluminum installations used in our building, such as windows, doors, spandrels, plaques, and the tower roof. All of the installations have lived up to our expectations as to ease of operation and low maintenance." Thus writes the First National Building Corporation of Oklahoma City, Oklahoma.

Fine in appearance and easy to keep looking that way; therefore, low on upkeep. These facts help account for the widespread use of Alcoa Aluminum architecturally before the war. They help account, too, for the eagerness of architects "to get going with aluminum" in their postwar designs.

Aluminum is available from Alcoa in all forms; castings, sheet, tubing, bar, rod and extruded shapes. Fabricators, everywhere, in their war work, have had a wealth of experience in working with and finishing aluminum. You will now find it easy to have your designs executed.

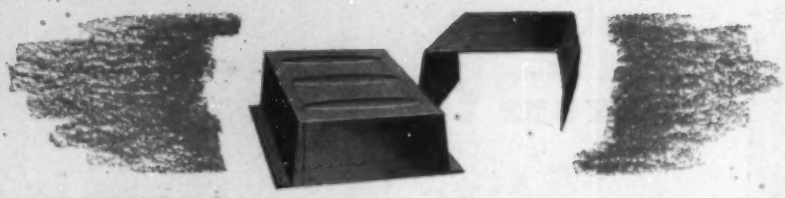
For advice on the use of aluminum, write ALUMINUM COMPANY OF AMERICA, 2167 Gulf Building, Pittsburgh 19, Pa.

The Window of the Future is Aluminum

ALCOA ALUMINUM

ALCOA ALUMINUM REG. U.S. PAT. OFF.

HOW THIS SMALL STEELFORM EFFECTED R



THE very building itself is testimony to the inscription over its stately portals —"The salvation of the state is watchfulness in the citizen." For the Nebraska state fathers, ever watchful of economies, *created this monumental masterpiece at substantial savings to the tax payer.* Some of the most important economies were made possible by the Meyer Steelform, produced exclusively by Ceco.

Ceco introduced this dynamic engineering concept in reinforced concrete construction just 31 years ago. Today, because of its inherent advantages over other concrete joist forms, over 200,000,000 square feet of concrete joist floors have been built with Meyer Steelforms. This because the Meyer Steelform provides three distinct construction economies:

1. Direct savings in concrete and steel;
2. Direct savings in supporting formwork;
3. Direct savings in number of forms used, for the Meyer *removable* form can be used over and over on a nominal rental basis.

Yes, for builders using reinforced concrete construction, Meyer Steelforms and Ceco construction products do a better, more economical job, through better engineering.

CECO STEEL PRODUCTS CORPORATION • *General Offices* • *Omaha, Nebraska*

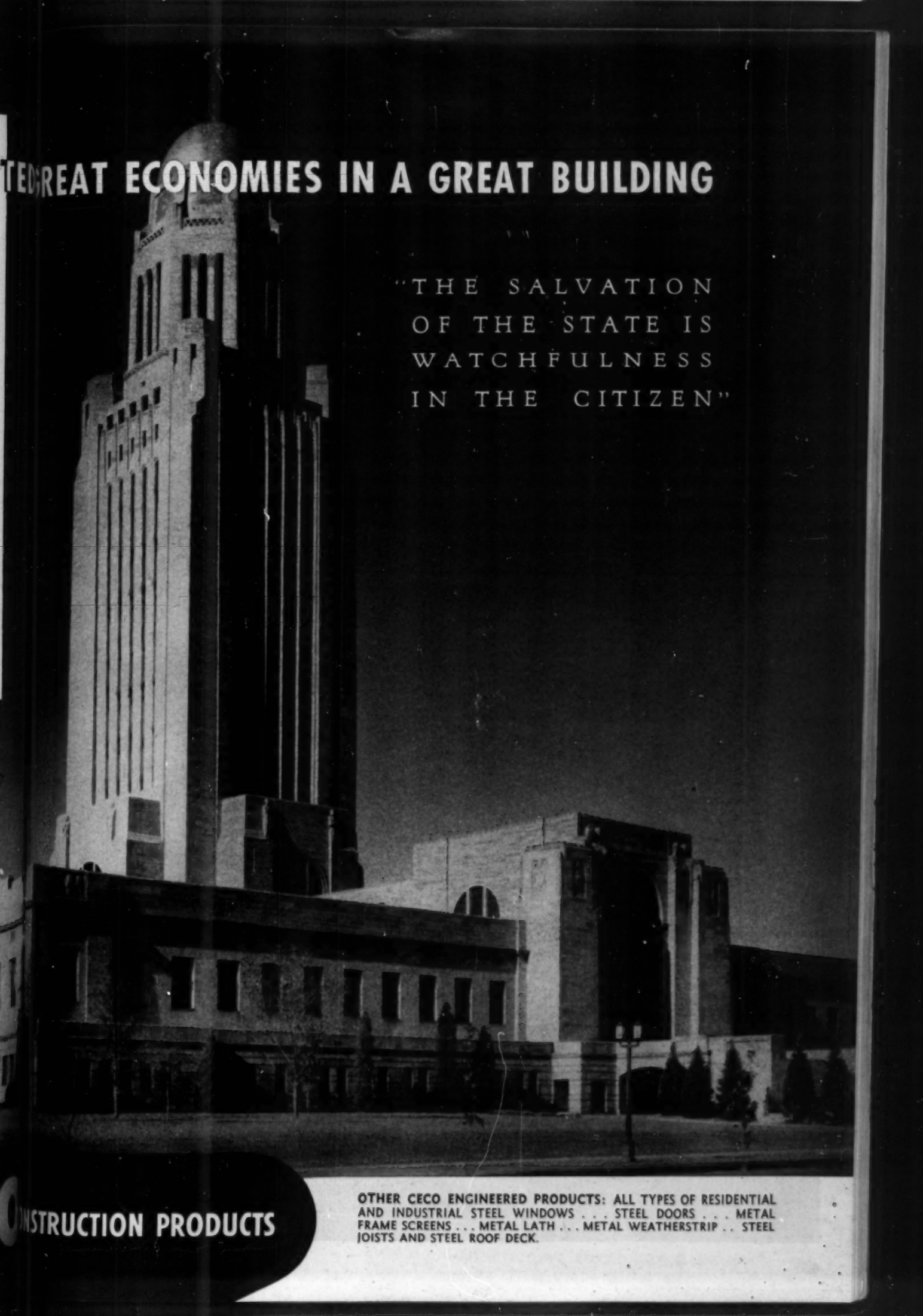
Manufacturing Division • 5701 W 26th St., Chicago, Ill.

Eliminates extra framework . . With the Meyer Steelform you use a simple open wood centering, that can be removed and re-used with the Meyer Steelforms from one floor to the next.

Gain time and efficiency . . The placing of reinforcing bars and concrete goes faster when you use Meyer Steelforms, and their solid rigidity eliminates leakages, insures accurate execution of structural design.

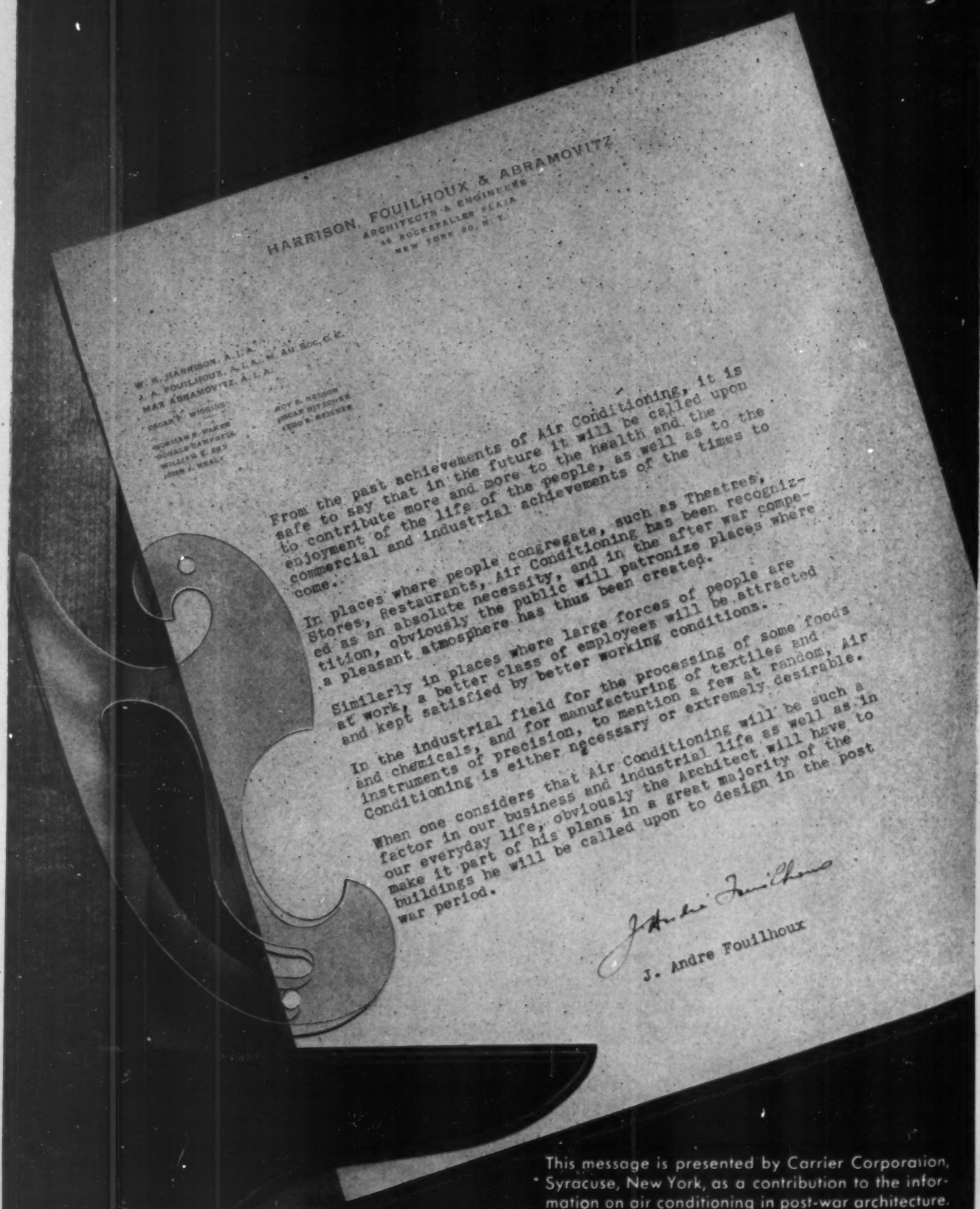
Complete list of Ceco engineered products for reinforced concrete construction includes: Meyer flange type steelforms, Meyer adjustable type steelforms, reinforcing bars, column spirals, welded fabric, bar chairs, spacers and accessories, column clamps and adjustable steel shores.

ENGINEERING MAKES THE BIG DIFFERENCE IN CECO NSTR


TED GREAT ECONOMIES IN A GREAT BUILDING
"THE SALVATION OF THE STATE IS WATCHFULNESS IN THE CITIZEN"
CONSTRUCTION PRODUCTS
OTHER CECO ENGINEERED PRODUCTS: ALL TYPES OF RESIDENTIAL AND INDUSTRIAL STEEL WINDOWS . . . STEEL DOORS . . . METAL FRAME SCREENS . . . METAL LATH . . . METAL WEATHERSTRIP . . STEEL JOISTS AND STEEL ROOF DECK.

In places where people congregate . . .

an absolute necessity

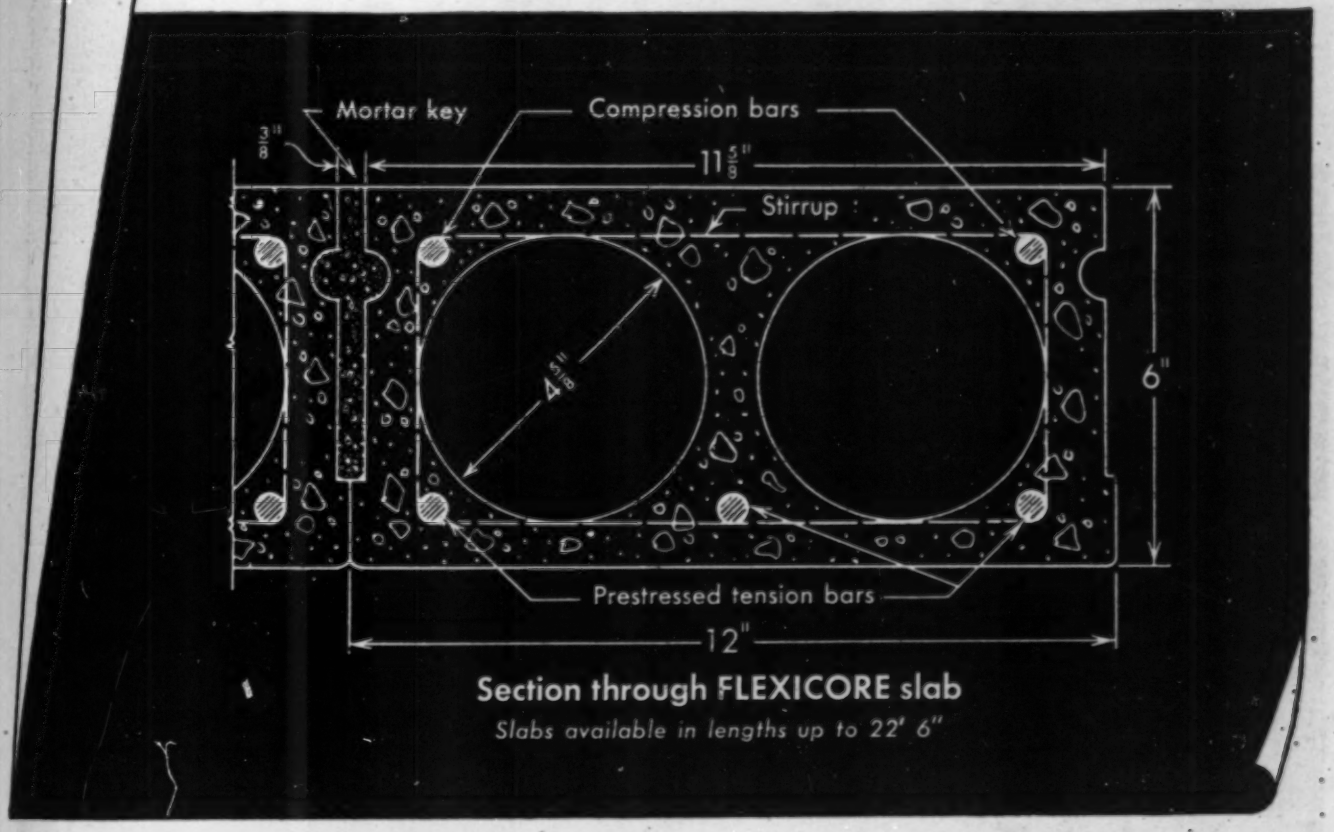

HARRISON, FOUILHOUX & ABRAMOVITZ
ARCHITECTS & ENGINEERS
From the past achievements of Air Conditioning, it is safe to say that in the future it will be called upon to contribute more and more to the health and the enjoyment of the life of the people, as well as to the commercial and industrial achievements of the times to come.
In places where people congregate, such as Theatres, Stores, Restaurants, Air Conditioning has been recognized as an absolute necessity, and in the after war competition, obviously the public will patronize places where a pleasant atmosphere has thus been created.
Similarly in places where large forces of people are at work, a better class of employees will be attracted and kept satisfied by better working conditions.
In the industrial field for the processing of some foods and chemicals, and for manufacturing of textiles and instruments of precision, to mention a few at random, Air Conditioning is either necessary or extremely desirable.
When one considers that Air Conditioning will be such a factor in our business and industrial life as well as in our everyday life, obviously the Architect will have to make it part of his plans in a great majority of the buildings he will be called upon to design in the post war period.
J. Andre Foulhoux

This message is presented by Carrier Corporation, Syracuse, New York, as a contribution to the information on air conditioning in post-war architecture.

FLEXICORE
FACT FILE NO. 1

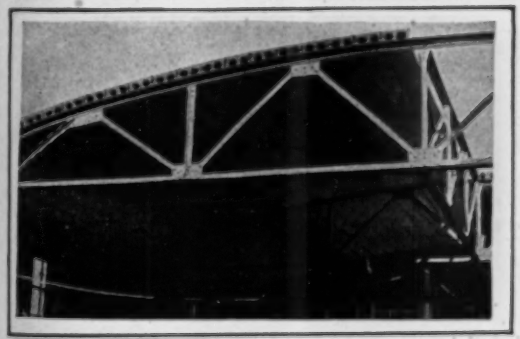
Clip and save for permanent reference. A durable "Fact-File" folder will be furnished free when you send for the new sketchbook on FLEXICORE. Watch for the next "Fact-File" to appear in this publication.

what is flexicore floor and roof slab?



Section through FLEXICORE slab

Slabs available in lengths up to 22' 6"



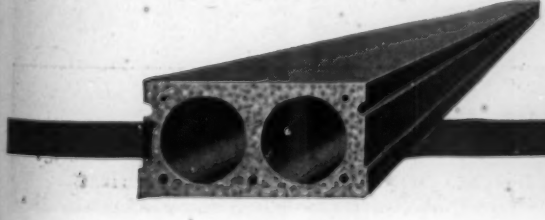
Arched roof showing long FLEXICORE *spans*

In addition to the Dayton plant, FLEXICORE Floor and Roof Slab, is made available by: Midwest Concrete Pipe Co., Chicago; Independent Concrete Pipe Corp., Inc., St. Louis; Anchor Concrete Products, Inc., Buffalo; Marietta Concrete Corp., Marietta, Ohio.

FLEXICORE Floor and Roof Slab is a unique precast, hollow-cast, reinforced concrete unit. Hollow-cast design saves weight, saves material, insulates, fireproofs (D-2 rating) and provides for flexibility in installation of utilities. Prestressing, or application of permanent tension to lower steel reinforcing rods, eliminates concrete shrinkage cracks and increases strength to permit spans up to 22 feet for light load. Standard unit design makes FLEXICORE readily adaptable.

In addition to these structural advantages, FLEXICORE speeds installation... it's precast, precured, easily handled... top side provides level base for any floor covering... underside presents smooth ceiling ready for painting. Although a comparatively new development, *several million square feet of* FLEXICORE *have been installed* in many industrial, commercial, institutional, agricultural and residential buildings. Thousands more square feet are being installed each week.

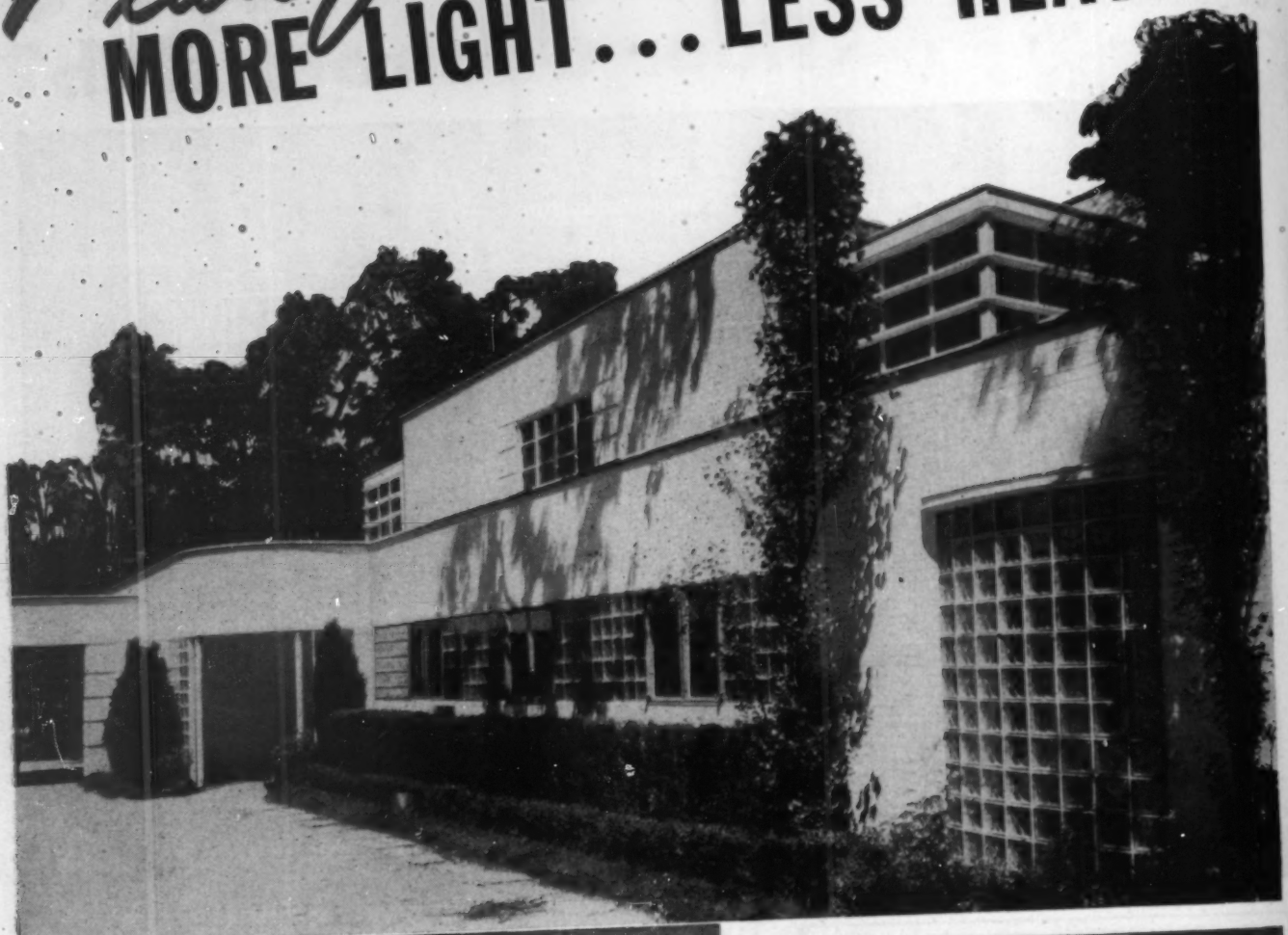
Send for the Engineers' and Architects' FLEXICORE Sketchbook . . . . contains the answers to 28 important questions and hand drawn notes . . . address Flexicore Division, Price Brothers, Dayton 3, Ohio.



flexicore FLOOR & ROOF SLAB

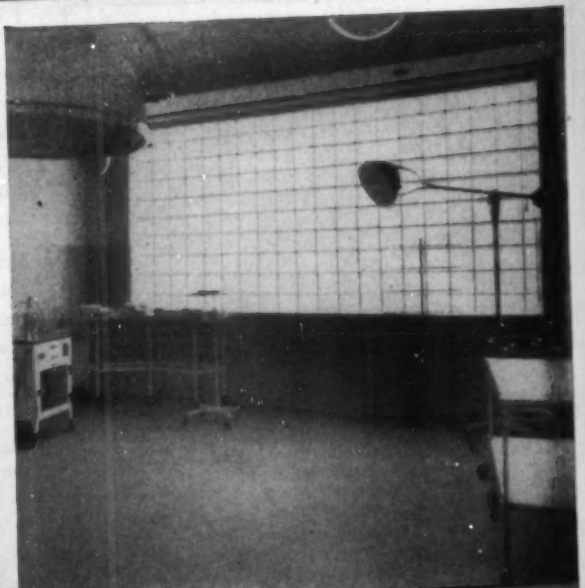
PRICE BROTHERS CO., DAYTON 3, OHIO

Plan for MORE LIGHT... LESS HEATING



In this distinctive modern home PC Glass Block panels enhance exterior appearance, flood cheerful interiors with plenty of clear daylight and ease the load on heating and air-conditioning equipment. The clean design and smooth surface of PC Glass Blocks in walls, partitions and screens make them quick and easy to clean. Their insulating qualities eliminate condensation. Privacy is assured. Drafts and infiltration of dust are prevented. Architect — Philip B. Maher.

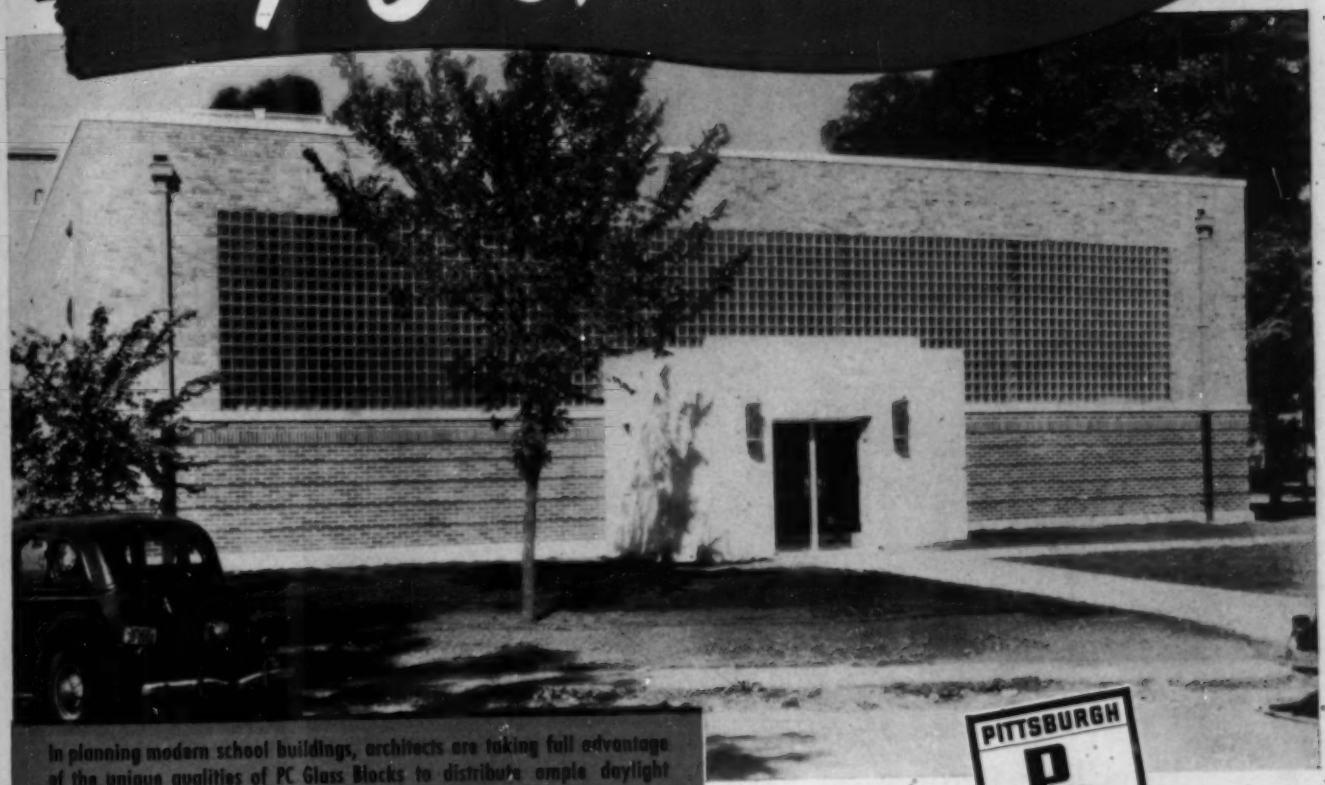
When large areas of sash were replaced with panels of PC Glass Blocks in this food plant, workrooms were more generously supplied with diffused daylight, sash repairs and replacement were eliminated, the panels were cleaned in a few minutes by a man with a long-handled brush.



In modern hospitals PC Glass Blocks provide proper lighting, insure healthful warmth, are so easily cleaned that sanitation is maintained at low cost. Another advantage is reduced distraction from outside sights and sounds.

AND CLEANING COSTS...

WITH *PC Glass Blocks*



In planning modern school buildings, architects are taking full advantage of the unique qualities of PC Glass Blocks to distribute ample daylight to all parts of classrooms, as shown above. These blocks also cut heat losses, exclude dust, deaden distracting noises. Architect—Oren Thomas.

YOU can confidently recommend PC Glass Blocks to your most exacting clients, for homes of all types, sizes and costs. They are also being used successfully in many types of factory buildings. They can save time, trouble and money for your industrial clients.

PC Glass Blocks are produced by the Pittsburgh Corning Corporation whose up-to-the-minute facilities and equipment, experienced personnel and specialized knowledge accumulated through years of research, combine to maintain leadership in the field of glass processing.

When you want authoritative information about PC Glass Blocks—construction data, sizes, patterns, figures on insulating and light transmitting characteristics—for homes and for industrial, commercial and institutional buildings—we shall be glad to supply them upon request.

PITTSBURGH CORNING CORPORATION
632 DUQUESNE WAY · PITTSBURGH 22, PENNA.

PITTSBURGH PC CORNING

GLASS BLOCKS

Distributed by

PITTSBURGH PLATE GLASS COMPANY

and by W. P. Fuller & Co. on the Pacific Coast

Pittsburgh Corning Corporation—Room 701
632 Duquesne Way, Pittsburgh 22, Pa.

Gentlemen:

Please send me the free, illustrated books that tell how PC Glass Blocks have been used successfully in many types of buildings.

Name.....

Address.....

City..... State.....

A new idea in TRANE catalogs
to aid you in specifying . . .

TOMORROW'S HEATING AND AIR CONDITIONING NOW!

You Can Select Exactly What You Need From the World's Largest Line of Heating—Cooling—Air Conditioning—Air Handling Equipment From This One All-Inclusive Catalog

For that postwar building project you now have on the drawing boards, Trane provides a revolutionary new Products Catalog. Its 84 pages present a complete array of heating, cooling and air handling products. Products that will be ready the moment war restrictions are removed. Products that can be specified now. Products from the most complete line of its kind in the industry.

Before the new catalog was printed, Trane Engineers condensed capacity information—streamlined roughing-in dimensions—boiled down selection data to an absolute minimum—provided just enough tables, charts and details to correctly select the products illustrated.

You can specify the heating, cooling and air handling equipment for any postwar project. Everything that is required—the illustration of the product—the information to select the product—is contained in this one complete catalog.

Shortages and other wartime conditions make it necessary to restrict the distribution of this new catalog to those directly concerned with the selection, purchase and installation of heating, cooling, air handling and air conditioning equipment. Architects, engineers, contractors, industrial executives and maintenance engineers—in requesting your copy of the Trane Postwar Products Bulletin—please use your regular letterhead and say, "Send me my copy of PB290."

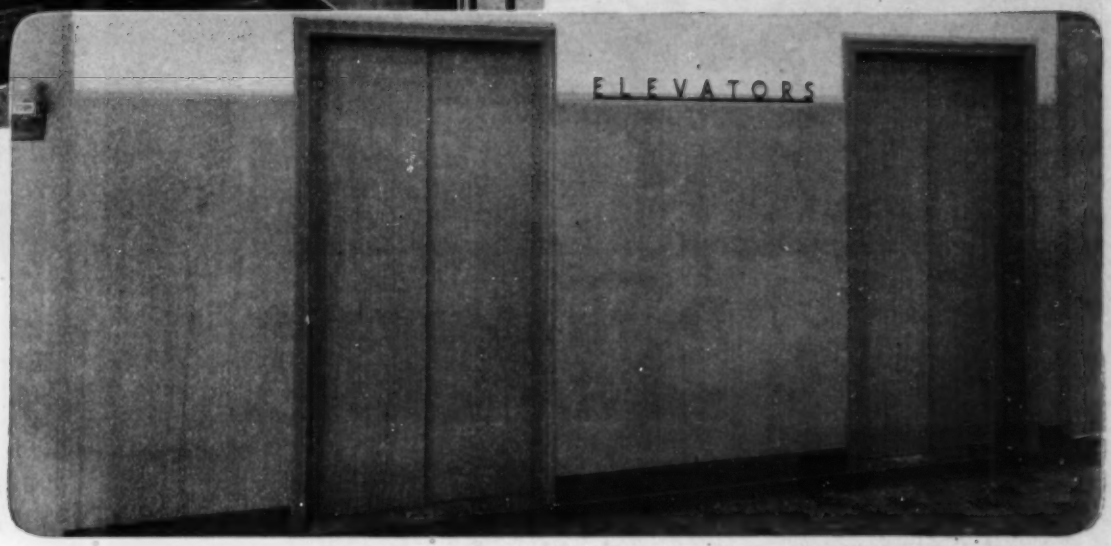
TRANE (AIR)

THE TRANE COMPANY LA CROSSE, WISCONSIN

TRANE COMPANY OF CANADA, LTD., TORONTO

AIR CONDITIONING · · HEAT TRANSFER · · AIR HANDLING EQUIPMENT

"REALWOOD" for SPARKLING ELEVATOR CABS AND LOBBIES!



FOR the severe service the interior of your elevator cabs and your elevator lobbies must take, nothing is more modern, handsome or resistant to moisture, wear, and staining than a Formica laminated plastic sheet in which the actual veneer of fine wood has been introduced.

The sheet is plastic—non-absorbent, chemically inert, hard and durable. But it has the authentic appearance of fine wood under a hard, colorless, and almost everlasting finish.

It can be washed with soap and water, solvents—any cleaning method you might use for instance on glass. So it is very easy to keep clean and sparkling with a minimum of labor.

This sheet does not yellow with age, craze or crack through loss of surface elasticity. It stands years of wear without the slightest change in appearance.

Data for writing specifications including methods of installation are available on request.

FORMICA

THE FORMICA INSULATION COMPANY • 4651 SPRING GROVE AVENUE, CINCINNATI 32, O.

Darkness rode in on the hurricane

It was early evening when the September hurricane hit the Jersey Shore. Lights were just being turned on . . . soon to be blotted out as poles toppled and power lines went down. Homes, hotels, hospitals and public buildings were plunged into darkness, and at a time when light was needed most. A powerful ally had joined forces with the destroying wind and waves.

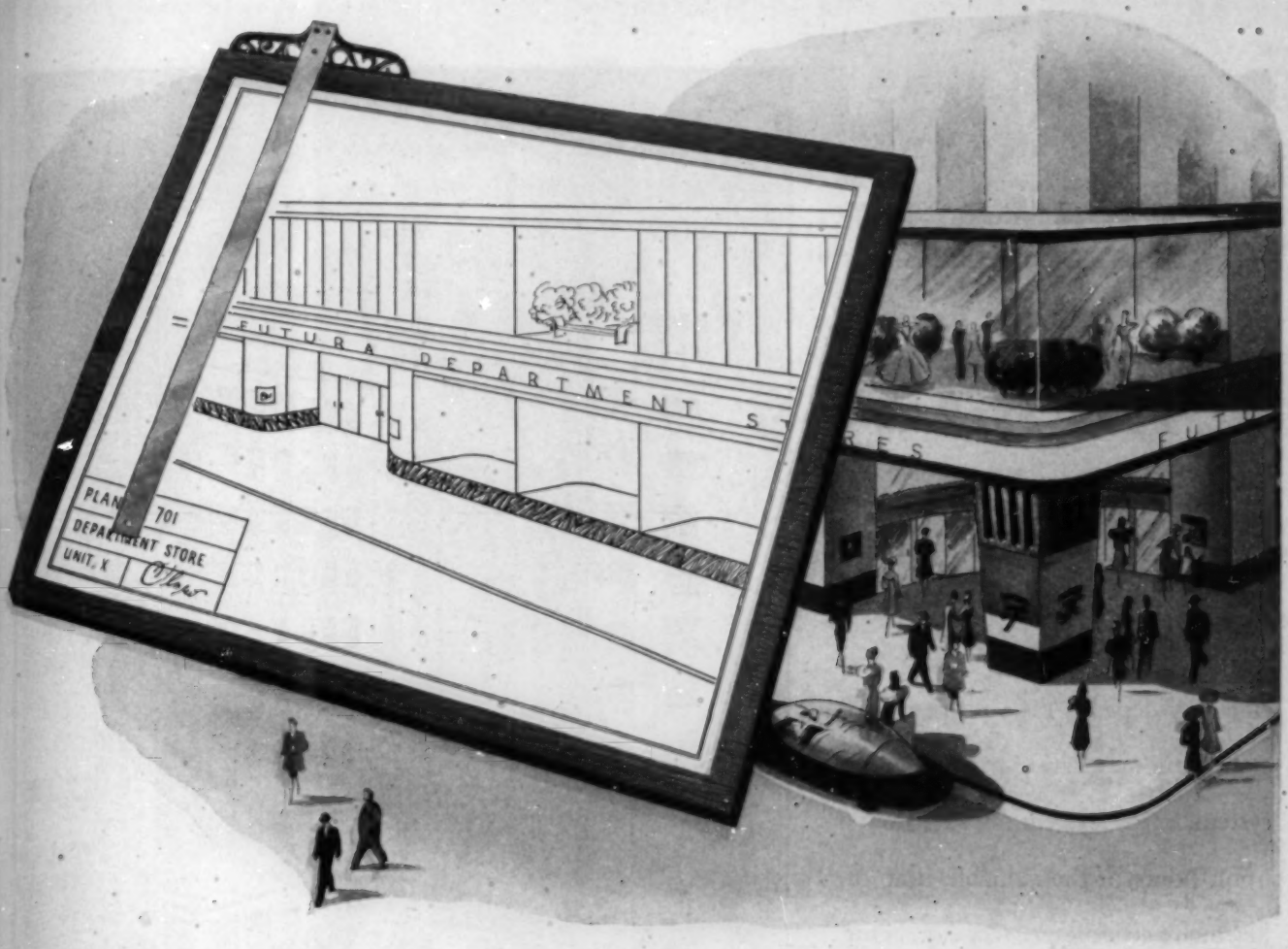
Despite all precautions of utility companies, accidents beyond their control can cause interruptions of normal electric current. Storms, floods, fires and collisions, strike with little or no warning, and are a serious menace to electric power lines.

The danger of such interruptions is avoided in the building that's equipped with an Exide Emergency Lighting Unit. It provides safe, sure, modern protection—operating instantly and automatically when needed. And it can be economically installed as an integral part of a building. For complete information, write or wire your nearest Exide Branch.

SUPPORT THE 6th WAR LOAN—LEND OVER HERE, TILL IT'S OVER, OVER THERE

THE ELECTRIC STORAGE BATTERY COMPANY, Philadelphia 32

Exide Batteries of Canada, Limited, Toronto



Tomorrow's Stores that say, "Come Again"

are on Architects' Drawing Boards Today

Every method to attract and retain more customers will be employed in the postwar stores which owners are commissioning their architects to plan today.

Store appeal begins with an attractive front designed to draw customers in. But the comfort they find inside will be even more important when you consider the problem of bringing them back to buy again.

That's why modern air conditioning is a part of all well-laid postwar store plans. It's essential to comfort.

Modern Air Conditioning means Westinghouse—and its years of pioneering research and engineering experience.

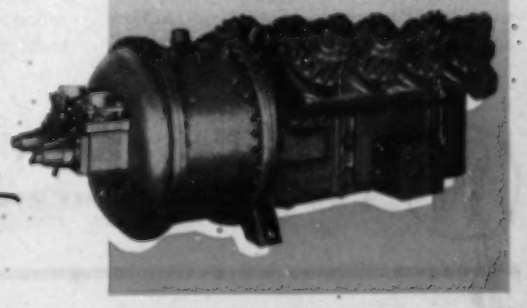
For essential war uses in factories, hospitals, airports, military bases, etc., Westinghouse Air Conditioning and Industrial Refrigeration Equipment is available today.

For executives, architects and engineers now planning postwar building and modernizing, dependable data and competent application engineering assistance are ready.

Phone your nearest Westinghouse office or write on your letterhead to Westinghouse Electric Elevator Company, 150 Pacific Avenue, Jersey City 4, New Jersey for your copy of a new booklet, "How To Plan Your Postwar Air Conditioning Today."

HERMETICALLY-SEALED FOR DEPENDABILITY

Westinghouse pioneered the Hermetically-Sealed Compressor. Hermetically-sealed means light weight · small size · low maintenance and operating costs · high efficiency · long life.



Westinghouse

PLANTS IN 25 CITIES . . OFFICES EVERYWHERE

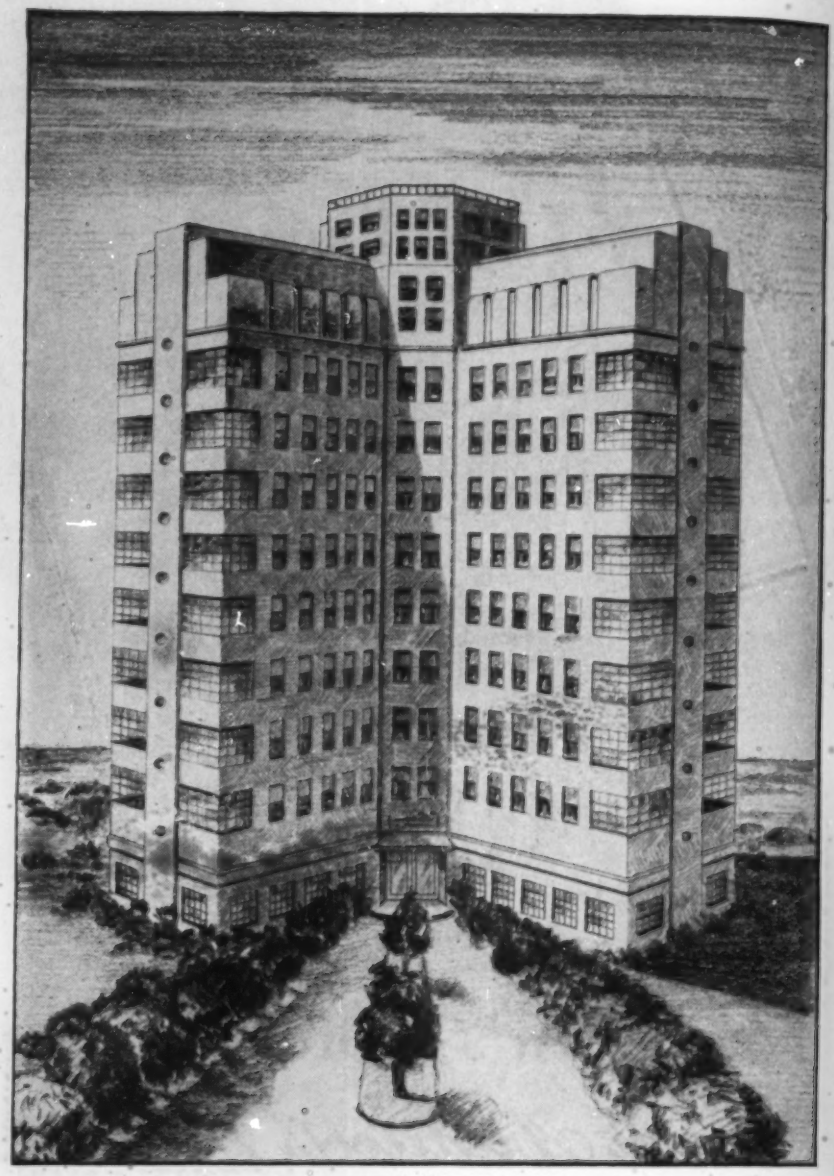
Air Conditioning

Westinghouse presents *John Charles Thomas* • Sunday, 2:30 E.W.T., N.B.C.
Ted Malone • Mon. Wed. Fri. 10:15 E.W.T., Blue Net.

PLAN

YOUR COMMUNICATIONS

EARLY



A HOSPITAL is the most complicated type of modern building. Its efficiency depends on a properly designed communicating and signalling system. Such a system can save hours upon hours of the valuable time of key men and women every day . . Our engineers will gladly assist in preliminary consultation, and offer suggestions on equipment and specifications, without obligating you in any way.

"Connecticut" doctors' registering and paging systems include many types of equipment suitable for hospitals of all sizes. They are adaptable to almost any special conditions.

The usefulness of nurses' time can usually be doubled by the installation of Connecta-call systems, which save needless steps and make patients' needs known sooner.

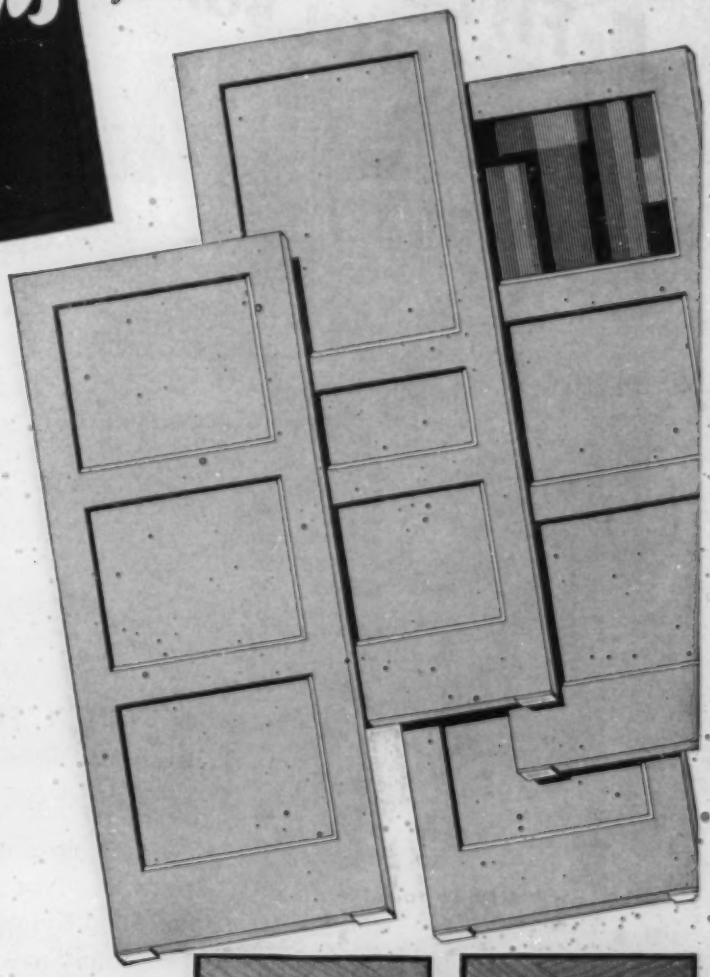
Special telephonic equipment for special applications, such as the nurses' home instrument illustrated have many advantages, including a high degree of communicating efficiency and minimum maintenance cost.

CONNECTICUT TELEPHONE & ELECTRIC DIVISION

GREAT AMERICAN INDUSTRIES, INC. • MERIDEN, CONNECTICUT

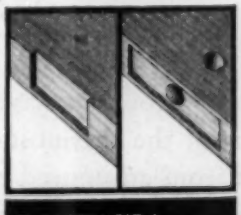
For Door Specifications

Modern 3-Panel Douglas Fir Doors Offer Attractive Layouts for Every Building Purpose



- Attractive, durable, smartly-designed Douglas Fir Interior Doors feature basic 3-panel layouts which are ideally adaptable to all types of building—designs in keeping with present-day interior treatment.
- These fine doors now offer the added advantages of a new FACTRI-FIT line. To your client, this means faster construction, a better fitting, better hanging door, and the elimination of unsatisfactory on-the-job cutting.
- You'll find that Douglas Fir Doors are suitable for every door specification—on today's essential jobs and on ALL building tomorrow.

1 FACTRI-FIT doors are pre-fit at the mill, trimmed to exact size, ready to hang without sawing or fitting.

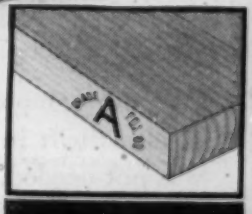


2 FACTRI-FIT doors may be ordered completely machined at your option—gained, bored or mortised by high-speed precision tools.

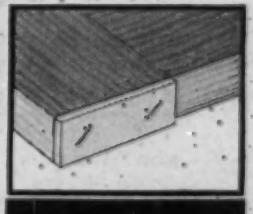
FACTRI-FIT

PRECISION-BUILT DOUGLAS FIR DOORS

A new line, available at slight additional cost—a cost more than offset by savings on the job.



3 FACTRI-FIT doors (like all Douglas Fir Doors) are edge grade-marked for ease in ordering, specifying and supplying.



4 FACTRI-FIT doors are scuff-stripped to protect the precision-cut corners during handling and shipping.

Douglas Fir DOORS

FIR DOOR INSTITUTE

Tacoma 2, Washington

Remember! NATURE MAKES DOUGLAS FIR *Durable!*

Durable Douglas Fir Doors are made from all-heartwood, vertical-grain, soft, old-growth Douglas Fir.

Write for catalog showing complete series of Douglas Fir Interior Doors, Tru-Fit Entrance Doors, and new specialty items.

Douglas Fir Doors are now available only for essential building. They'll be ready for general use again when war needs lessen.

IT TOOK FUEL RATIONING TO DO IT — to show folks that some boilers and airconditioners give a lot more comfort per fuel unit than others do.

It's been a tough lesson in some homes, and it isn't over yet. Nor will it be until the world settles down again to peace and good living. In many of those homes, discomfort is the mother of determination — to install a Fitzgibbons steel boiler or airconditioner just as soon as it is available.

In other, more fortunate homes, rationing coupons have meant only careful thrift in heating, the adjustment of the thermostat when heat was not needed, the turning off of heat from an unused room or two. Those are the homes heated by Fitzgibbons steel boilers or airconditioners.

Fuel rationing has been just one big national test of heating efficiency. Fitzgibbons steel boilers and airconditioners have passed that test.

BUY *and* HOLD U. S. WAR BONDS

NOW, TWO STARS in our "E" flag. Fitzgibbons holds the pace.

FITZGIBBONS BOILER COMPANY, INC. • 101 Park Ave., New York 17, N Y.

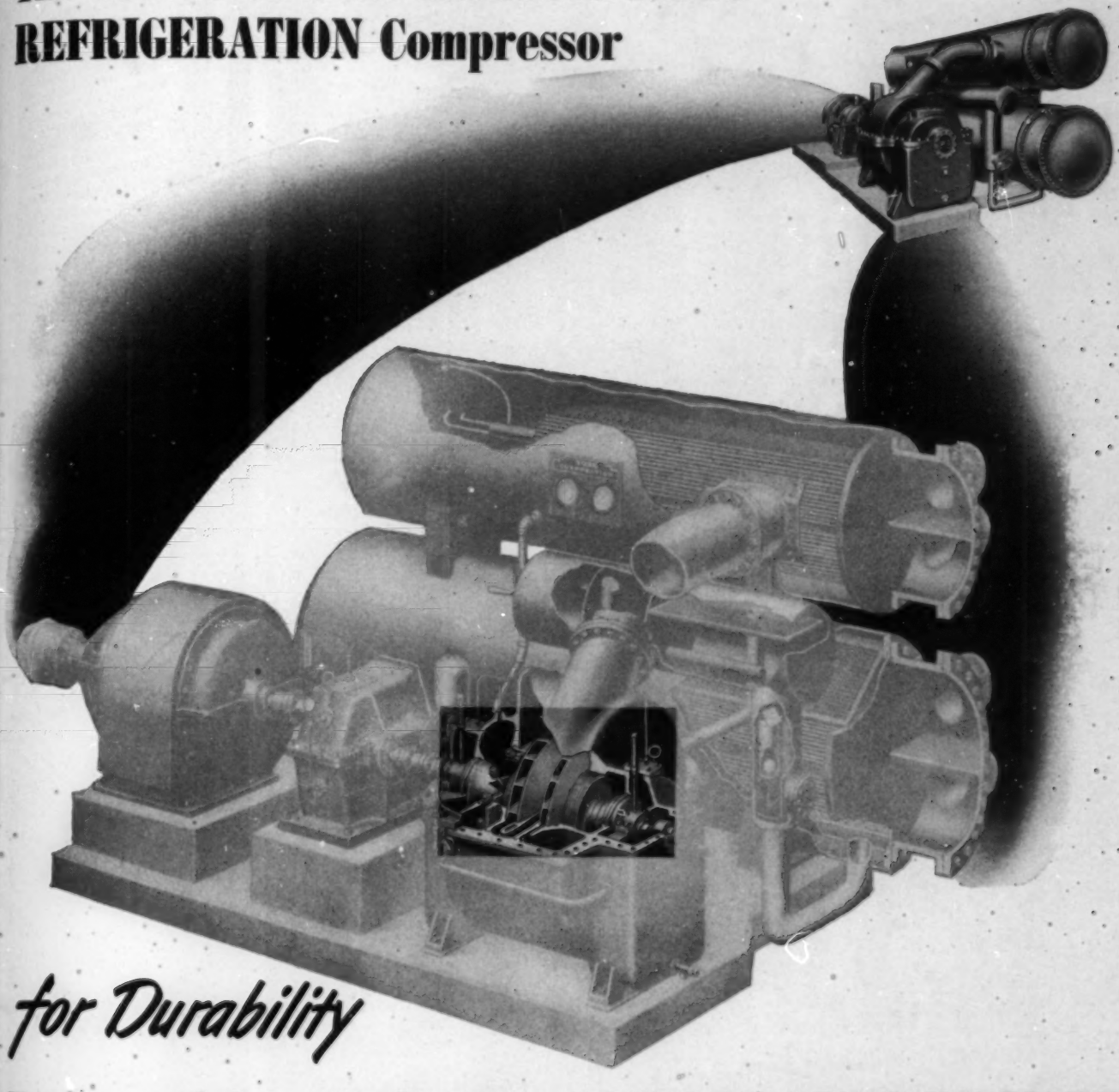
Works: OSWEGO, N. Y. • *Branches in Principal Cities*

Members: Indoor Climate Institute; Steel Heating Boiler Institute

FITZGIBBONS

THE NAME THAT MEANS *COMFORT* IN THE HOMES OF AMERICA

The YORK Allis-Chalmers Turbo REFRIGERATION Compressor



for Durability

Erosion and Corrosion Resistant STAINLESS STEEL IMPELLER

BECAUSE the stainless steel impeller blades of the York Allis-Chalmers Turbo Compressor successfully resist erosion and corrosion, perfect wheel balance is assured during service life. An exclusive construction feature is the elimination of blade rivet heads in impeller passages. Gas flow is unobstructed and noise cut to a minimum. To insure perfect impeller performance York engineers subject each wheel to a 30% over-speed test.

York Corporation, York, Pennsylvania.

Other outstanding features

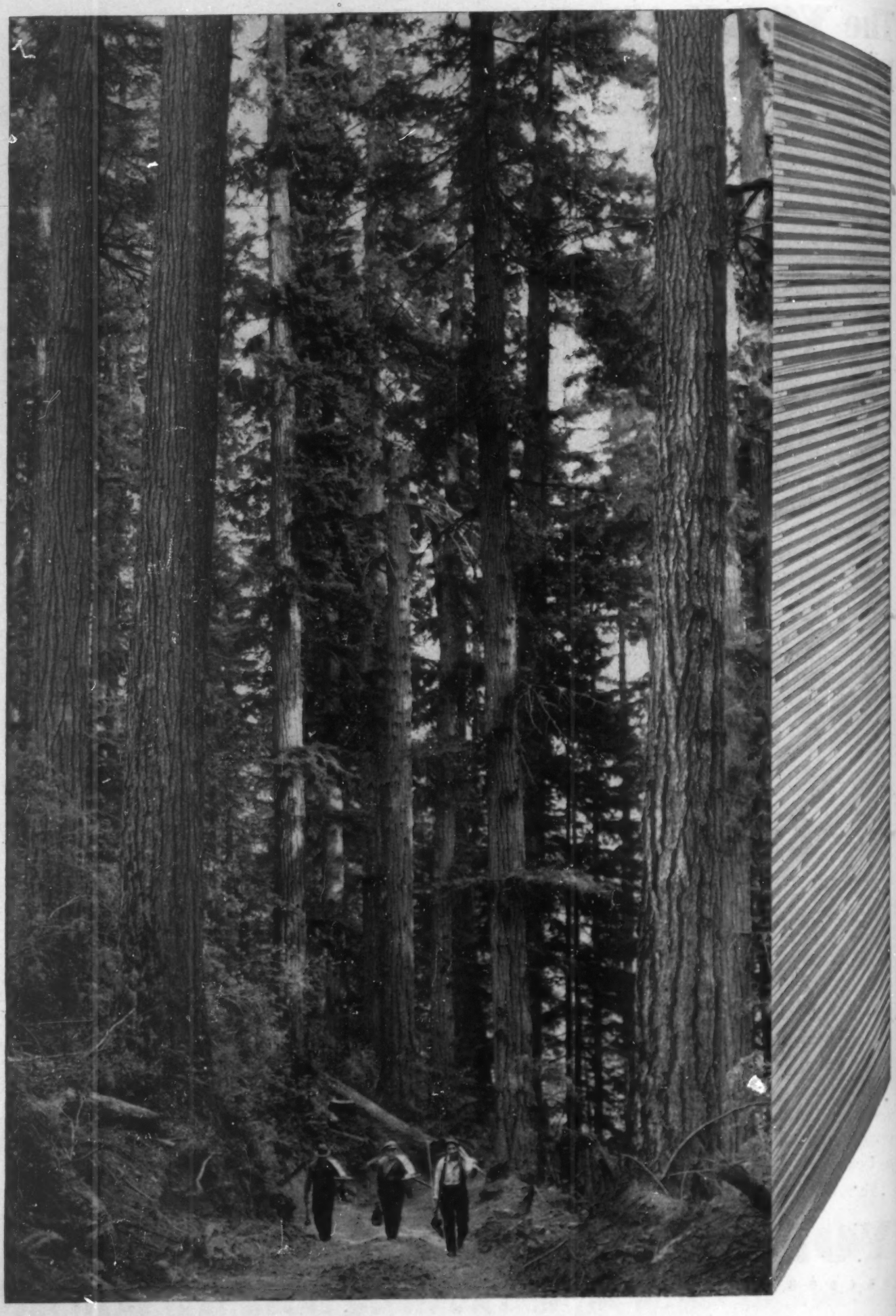
1. Low center of gravity of compressor—permitted by trough type cooler—cuts vibration, provides more accesible operation.
2. Balance piston to equalize wheel thrust makes necessary only a positioning thrust bearing, and results in less bearing friction losses.
3. Pre-rotation vanes permit greater capacity reduction (down to 10%.)
4. Permanently silver-sealed condenser joints.

Write for free booklet

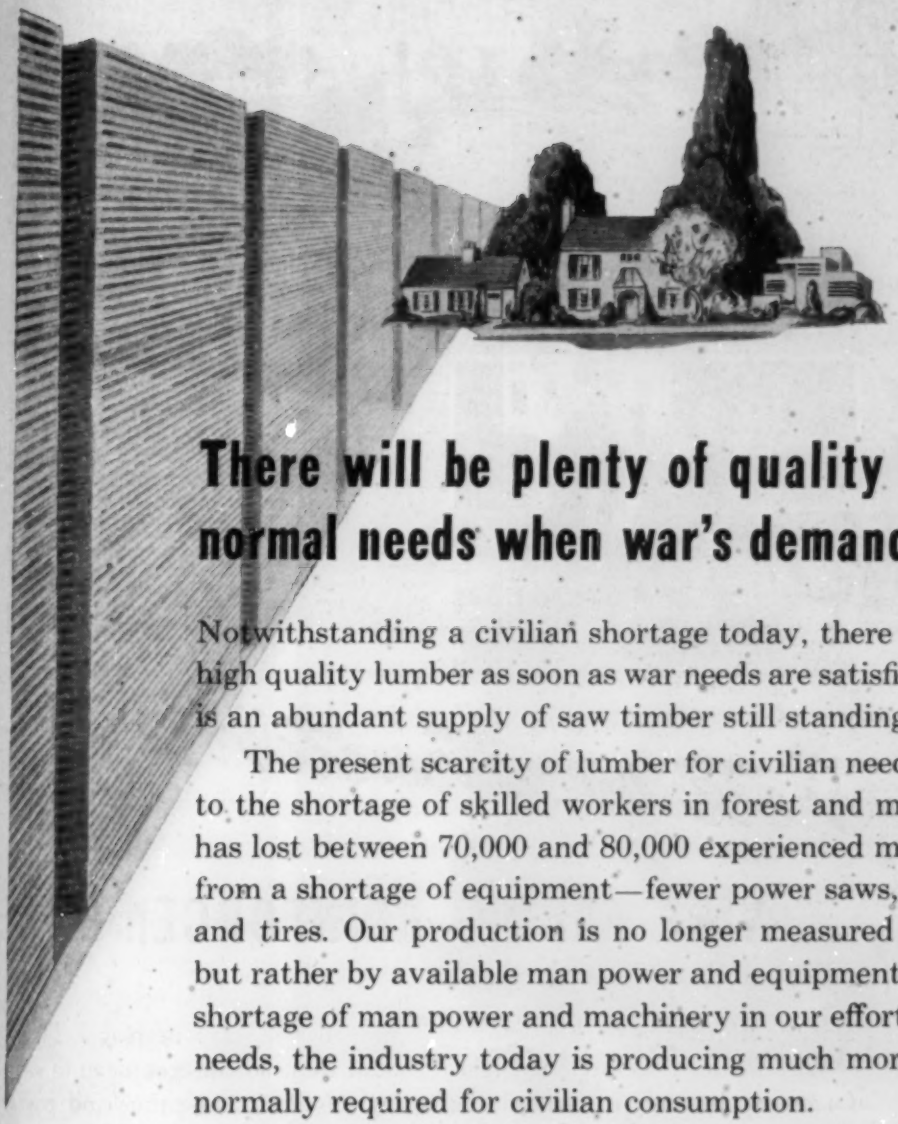
"New Light on York Turbo Compressors"

YORK REFRIGERATION AND AIR CONDITIONING

HEADQUARTERS FOR MECHANICAL COOLING SINCE 1885



here's one story that should be circulated...



There will be plenty of quality lumber for normal needs when war's demands are over!

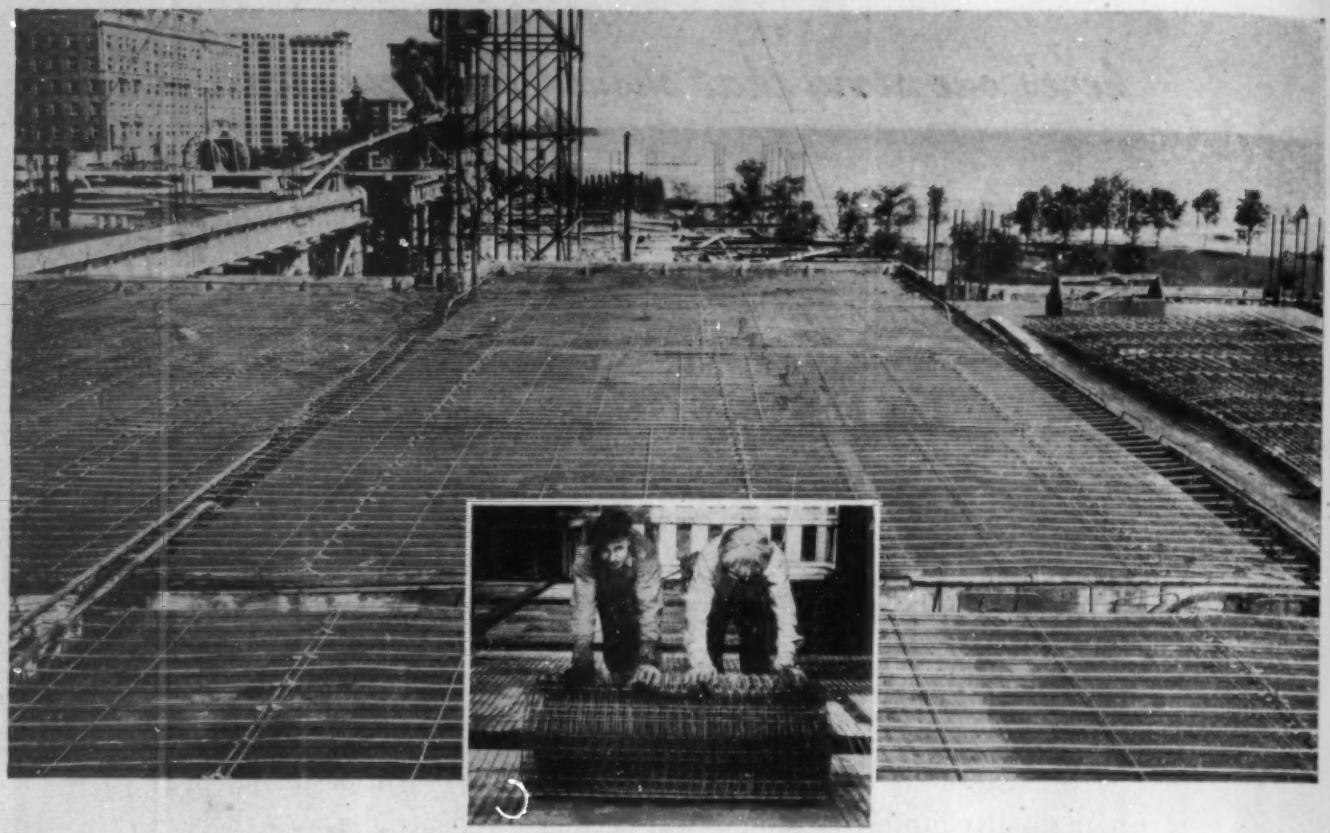
Notwithstanding a civilian shortage today, there will be plenty of high quality lumber as soon as war needs are satisfied, because there is an abundant supply of saw timber still standing in U. S. forests.

The present scarcity of lumber for civilian needs is due, in part, to the shortage of skilled workers in forest and mill. The industry has lost between 70,000 and 80,000 experienced men. It suffers too from a shortage of equipment—fewer power saws, tractors, trucks, and tires. Our production is no longer measured in mill capacity but rather by available man power and equipment. Yet despite the shortage of man power and machinery in our effort to meet the war needs, the industry today is producing much more lumber than is normally required for civilian consumption.

The channeling of this production to civilian markets is a simple matter. For there is no reconversion problem in the lumber industry. War needs and civilian needs are similar. They both use the same sizes, grades and items. With reconversion we'll simply continue to produce and ship traditional Weyerhaeuser quality for civilian consumption.

WEYERHAEUSER SALES COMPANY
SAINT PAUL 1, MINNESOTA

WEYERHAEUSER 4-SQUARE LUMBER AND SERVICES



For all concrete construction

. . . WIRE FABRIC REINFORCEMENT

MILLIONS of square feet of American Welded Wire Fabric have been used as reinforcement in prominent buildings all over the country. Because its adaptability to countless uses in concrete construction has been proved conclusively, because it is so practical, so convenient, so economical, it has won wide acceptance among architects and engineers.

Wire fabric is the preferred reinforcement because it enables the concrete slab to withstand impact, stresses and strains in every direction. Made of high yield-point cold-drawn steel, American Welded Wire Fabric is convenient to handle, is installed quickly and easily, lies flat and always stays in place. Think what those advantages mean in savings of construction time and costs.

We shall be glad to consult with you on reinforcement problems and to send you detailed information on the many and varied uses of American Welded Wire Fabric. Drop us a line today, without obligation.

AMERICAN STEEL & WIRE COMPANY

Cleveland, Chicago and New York

Columbia Steel Company, San Francisco, *Pacific Coast Distributors*

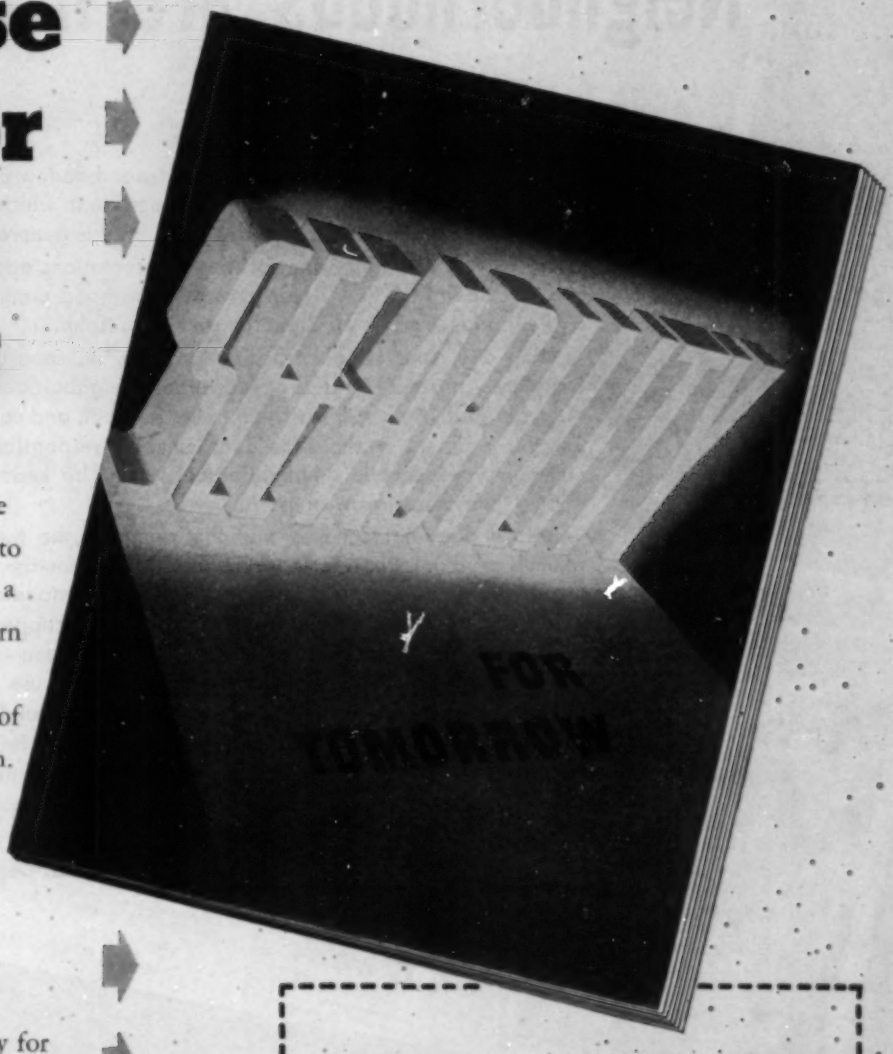
United States Steel Export Company, New York

AMERICAN WELDED WIRE FABRIC

UNITED STATES STEEL

FREE and really useful!

Get these ideas for modern lighting

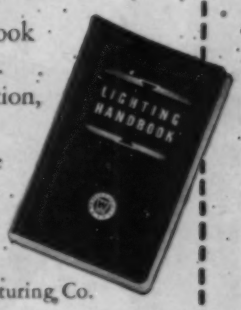


"See-Ability for Tomorrow" is the latest Westinghouse contribution to the science of good lighting. It is a portfolio of suggestions for modern lighting installations in homes, stores, offices, and factories—full of new ideas in design and application.

This portfolio will stimulate your imagination in the use of lighting as an artistic as well as utilitarian medium.

There is no charge for "See-Ability for Tomorrow". Merely fill in the attached coupon and we will be happy to send it to you. Westinghouse Electric & Manufacturing Company, Lamp Division, Bloomfield, N. J.

Westinghouse Lighting Handbook is still available at $1.00 a copy. 175 pages of technical information, sketches, tables, formulae and suggestions. If you do not have a copy, send for one today.



Westinghouse Electric and Manufacturing Co.
Lamp Division, Bloomfield, N. J.
Please send me:
( ) copies of your "Lighting Handbook" for which I enclose $.....
( ) copies of your free booklet "See-Ability for Tomorrow."

Name.....

Address.....

Firm Name and Address.....

R-12

Westinghouse

PLANTS IN 25 CITIES . . . OFFICES EVERYWHERE

MAZDA LAMPS FOR SEE-ABILITY

Neighborhoods are living things

Revere has long been interested in post-war housing problems. During the past two years it has sponsored an advertising campaign in which has been presented the ideas of some leading architects and designers on this general subject.

One of the most important of these presentations appears in the Saturday Evening Post, October 14, 1944. It concerns neighborhood planning as seen through the eyes and experience of Oscar Stonorov and Louis Kahn.

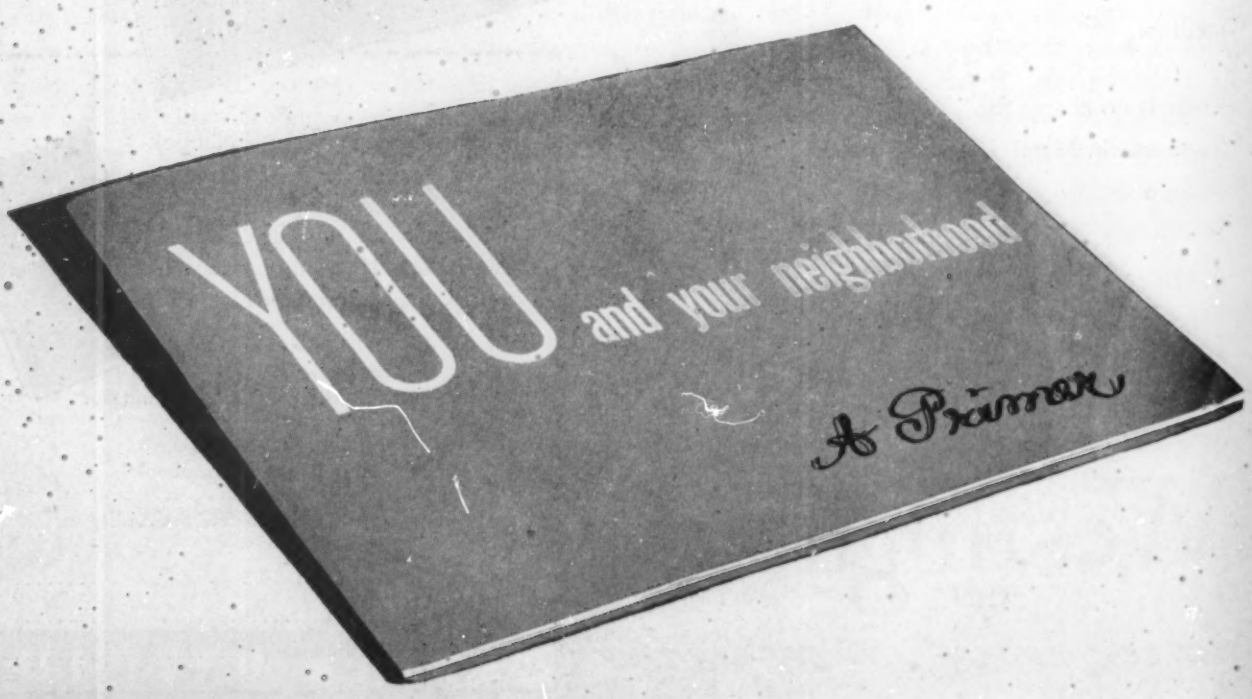
"You and Your Neighborhood—A Primer" is concrete, exceptionally factual and completely practical. It is designed to help neighborhoods to solve their own problems of local rehabilitation. It is written in the full faith and conviction that, in the last analysis, the problem is the individual citizen's responsibility as well as a matter of community cooperation. Neighborhoods must be kept alive because, like all living things, "they must grow or perish".

Revere does not contend that this primer is the final answer to a complex and difficult problem. But it is very sure that it will stimulate the thinking and the action of thousands of people who want to improve the standard of living and appearance within their communities. In stressing copper and copper base alloys as indispensable in any plan of post-war neighborhood conversion—rebuilding, repairing or new construction—Revere is again convinced that their use makes any building better to live in, easier to rent or sell. It feels that the whole building industry must be benefited by such a book as "You and Your Neighborhood—A Primer".

If you would be interested in receiving a copy of the primer as described above, Revere will be glad, without obligation, to send one copy to any one who writes.

Please be prompt in your request since the edition is of necessity limited.

Address: Revere Copper and Brass Incorporated, Dept. AF, 230 Park Avenue, New York 17, N. Y.



Let YOURS be these helping hands

Neighborhoods are living things, not just inert lumber, metal and stone.

And, like all living things, they must grow or perish.

Take your neighborhood, for instance. It must improve, or it will deteriorate. Often, in a few years a neighborhood becomes unrecognizable, its values completely destroyed. An idle loft building or factory becomes a festering sore, spreading the infection of obsolescence. People who dwell in unimproved houses soon breed diseases and delinquency. Shrinking playgrounds drive the children into side streets or empty lots.

City planners, no matter how much they want to, cannot prevent this. They cannot protect individuals or groups unless they know what is needed. Once they do know, they can usually help.

Why don't you let them know about your neighborhood, since someone must? Let yours be the hands to set in motion the forces needed for its reshaping.

To help you, we have prepared a book that tells in simple language how you and a few friends can help your neighborhood help itself. You'll need no technical background to understand this book. You'll need no technical experience to follow its instructions. Every other one of its ninety-six pages is an illustration, a diagram or a plan. Color makes these pictures unmistakably clear. And page by page it sets forth each succeeding step you must take to achieve a revitalized neighborhood.

A better school, a larger playground, modern housing, a shopping center, restricted traffic, park areas . . . every neighborhood can rightly claim these. This book, "Your and Your Neighborhood — A Primer" can help you get them. It is an expression of faith in the American man or woman's willingness to assume responsibility, and capacity to get things done.

It is an expression of faith in you.

OSCAR STONOROV • LOUIS KAHN

* * *

Revere asked Messrs. Stonorov and Kahn to write "You and Your Neighborhood — A Primer" because of the many letters we received asking for such help. We had already presented a project of theirs on local rehabilitation which had met with tremendous response. And we felt that such a primer fitted in with the contribution we are trying to make to better living.

At the same time we knew that once citizens became interested in lasting life for their neighborhoods, they must also become interested in copper. For copper, enemy of rust and weather, is the metal of lasting life. Consider! If a fi for permanence, if its roof, flas heating system are in good sha and newspaper inside, a particu to renovate it. A coat of paint job is done at comparatively s why, in building or modernizi copper and copper alloys mak to live in, to own, or to sell.

The primer turned out to be taking than we had imagined. it had to be specific, it had to so it grew and grew until th pages! But when we brought became very stern on the sul forced us to publish only a l that reason, though we invite individual or any group interes planning, we shall only be abl to any one who writes. Just se the address below.

BUY MORE WAR BONDS

REVE
COPPER AND BRASS
Executive Offices: 230 Park Ave.

This advertisement appears in Saturday Evening Post, October 14, 1944

Don't wait for others — Do it yourself

Today is not too early to begin planning for yourself and your neighborhood. There is much to be done, and the task takes time.

Don't wait for someone else to start — do it yourself. Protect your piece of America. If everyone would do that, think how quickly the whole face of the country would improve.

When you do begin planning, whether for one house or for a thousand, plan for permanence. Flimsiness destroys the value not only of one house but also that of its neighbors. And the first cost of staunch, lasting materials is rarely much greater than that of substitutes and in the long run, much less.

Take copper for instance. If you will investigate carefully, you will find that it costs very little more than its rustable competitors. But the service and the satisfaction that you buy with it last as long as the building itself.

Even when it comes to replacing worn-out piping systems, Revere Copper Tube can save you important expenditures. For it can be worked between walls and long runs made, with only small openings near the fixtures being required. Thus by leaving in the old piping, much of the tearing up, carpentering, replastering, repainting are eliminated.

Of course Revere is dedicated 100% to war work. There is no copper available today for your use. But soon, perhaps, the return to peaceful ways may come again. Revere would like to help you plan for that day — and on that day to help you build.

BUY MORE WAR BONDS TODAY

REVERE
COPPER AND BRASS INCORPORATED
Executive Offices: 230 Park Ave., New York 17, N. Y.

Design with Steel Joists

to avoid delays in post-war building

On top of all the other advantages of Bethlehem Steel Joist construction, there's one that's worth special consideration right now. That is the fact that when post-war building is resumed, steel joists should be in ample supply immediately. Whereas some other materials may remain scarce for some time to come.

Keep this in mind for the light-occupancy buildings that you'll be designing some day soon. And consider as well the real economies and other lasting advantages which Bethlehem Open-Web or Longspan Joists will afford.

Bethlehem Joists, which reach the job completely fabricated, and marked for placing, make possible fast, labor-saving construction, without the need of falsework. They're rigid, and shrink-proof, thus avoiding plaster-cracks, squeaky floors and open baseboards. Used with concrete floor slab and plaster ceiling, they provide ample fire safety. And Bethlehem Longspan Joists give free floor space, without columns, up to 64 ft. in width.

USE
Bethlehem Steel Joists in Designing

APARTMENT HOUSES
HOTELS STORES
OFFICE BUILDINGS
DORMITORIES
HOSPITALS
SCHOOLS HOMES

BETHLEHEM STEEL

WILL THIS HAPPEN TO YOUR POST-WAR LIGHTING PLANS?

Many post-war lighting plans will be obsolete before they leave the drafting boards... Others will never reach the stage of installation . . . They will be out-moded because they had been prepared without knowledge of the revolutionary, precedent-shattering

LIGHT FLUX ANALYSIS

This technique, developed during the war emergency, radically changes lighting conceptions, setting up entirely new standards of present-day illumination.

Now this new procedure can be revealed... Get the basic facts about LIGHT FLUX Analysis—and its proper application to your individual post-war lighting projects.

Consult Holophane Engineers

Holophane design and research engineers at headquarters collaborate with application engineers in the field in two broad endeavors: (1) to explore and develop new advancements in illumination generally; (2) to provide the efficient and economical solution to any specific lighting problem...The Holophane Engineering Department offers, without charge, consultation and specifications as a service to architects and engineers.

ARMY NAVY

Holophane

HOLOPHANE COMPANY, INC.... *Lighting Authorities Since 1898*

342 MADISON AVENUE, NEW YORK 17 • Holophane Co., Ltd., 385 Yonge St., Toronto, Can.

COLLEGE BUILDING | BUILDING ENTRANCE | OFFICE LOBBY | HEALTH CENTER

Ideas for the use of GLASS in public buildings

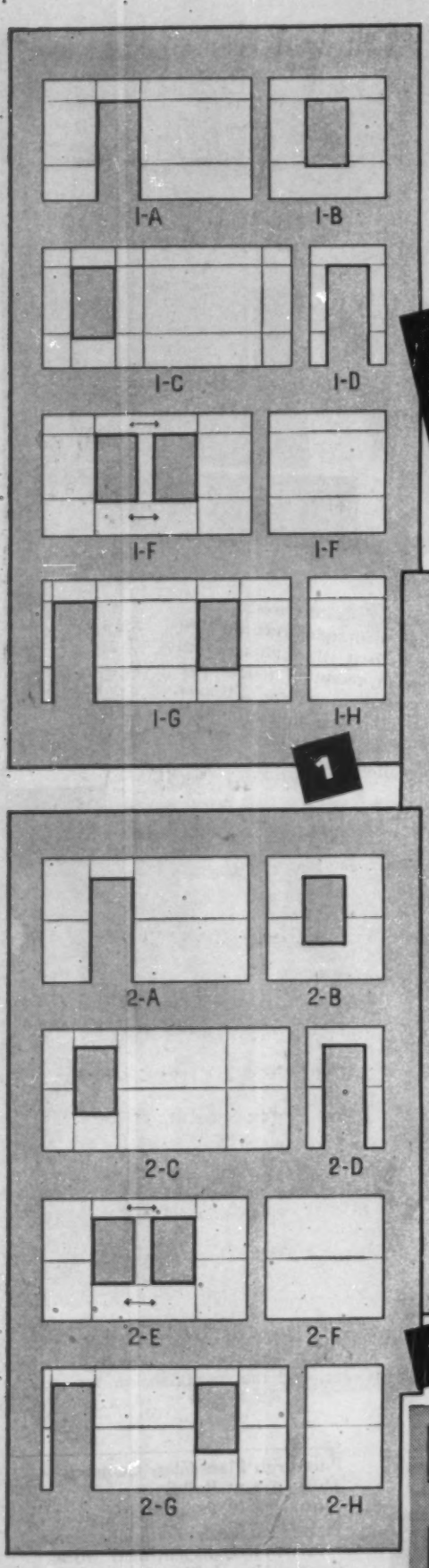
COLLEGE BUILDING

Recent example of the generous use of glass to assist in providing good lighting, good vision and good looks is this striking college building. Pennvernon Window Glass, with its fine finish on both sides of the sheet, its remarkable freedom from flaws, is always a dependable glazing material for structures like this. Hornbostel and Bennet, Associated Architects.

138

How to Panel Wall Surfaces with Douglas Fir Plywood

. . THESE SUGGESTED DESIGN TREATMENTS WILL HELP YOU BUILD MORE ATTRACTIVE INTERIORS . . . AND CONSERVE MATERIALS



Finished walls can be given an almost endless variety of design treatments through the use of Douglas fir plywood. For best results, certain fundamentals should be kept in mind.

WORK "FROM THE OPENINGS"

Start at the openings with vertical joints and divide the plain wall spaces in an orderly pattern with panels placed in reasonably balanced horizontal or vertical spaces. (See Figs. 1c, 2c, 3c) Where width of wall is 10 feet or less panels may be run horizontally in two or three pieces, with openings cut out. (See Fig. 1b and 2b.) Place vertical joints at each side of top of door and at top and bottom of window openings. (See Figs. 1a, c, e, g)

OPENINGS OVER 4 FEET REQUIRE HORIZONTAL TREATMENT

If width of door or window openings is over 4 feet, do not hesitate to place panels horizontally as in Fig. 1, 2 or 3e. Combinations of horizontal and vertical arrangements may be used in the same room with pleasing effect. Nine and ten foot lengths are available to assist in solving special problems.

SPECIAL PATTERNS

If special patterns or patterns made up of small panels are desired, the most satisfactory method of application is to sheath the walls with 5/16" or 3/8" Plyscord placed horizontally and apply the finish panels as desired.

For essential building Douglas fir plywood is available upon highest priorities. Plan now to use Douglas fir plywood in your postwar construction.

PLYPANEL D.F.P.A. TRADE MARK REG. U. S. PAT. OFF.

GENUINE PLYSCORD SHEATHING D.F.P.A.

GENUINE PLYWALL Douglas Fir Plywood WALLBOARD D.F.P.A. INSPECTED

GENUINE DOUGLAS FIR PLYFORM Concrete Form Panel D.F.P.A. INSPECTED

EXT.-D.F.P.A. TRADE MARK REG. U. S. PAT. OFF.

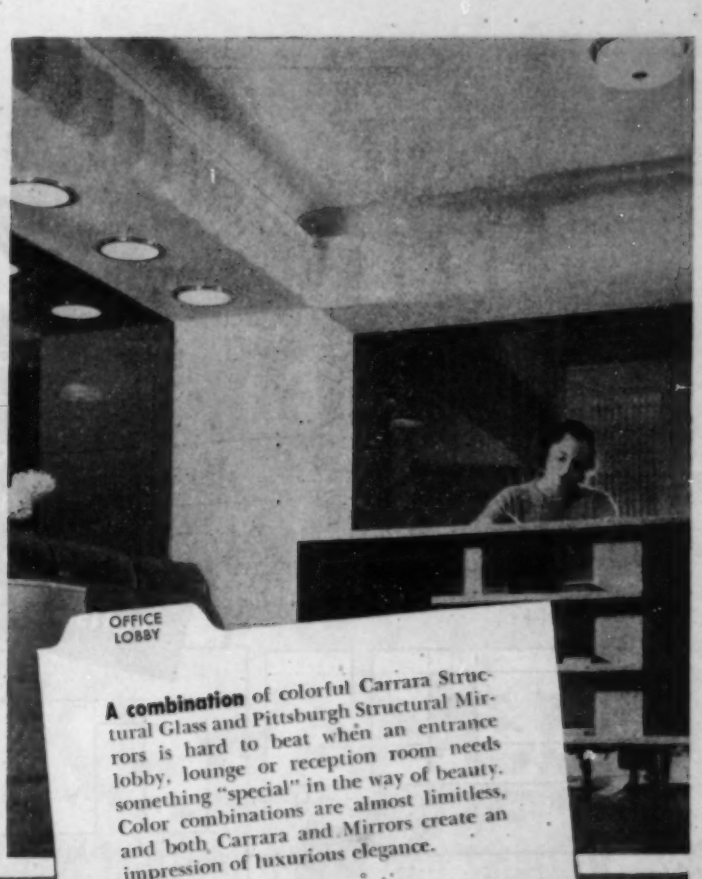
DOUGLAS FIR PLYWOOD LARGE. LIGHT. STRONG. Real Wood PANELS

SPECIFY DOUGLAS FIR PLYWOOD BY THESE "GRADE TRADE-MARKS"

140

BUILDING ENTRANCE

Winning universal favor among architects is the use of Herculite Doors at the entrances of many public buildings. These crystal-clear, impressively handsome doors have great strength, sturdiness and exceptional good looks. In the application pictured, two sets of Herculite Doors and side panels create an attractive vestibule. Architect: Robert Heller.



OFFICE LOBBY

A combination of colorful Carrara Structural Glass and Pittsburgh Structural Mirrors is hard to beat when an entrance lobby, lounge or reception room needs something "special" in the way of beauty. Color combinations are almost limitless, and both Carrara and Mirrors create an impression of luxurious elegance.

HEALTH CENTER

No gloom or depression of spirit will attack frequenters of a Health and Recreational Center as generously windowed as this distinguished building in Texas. Similarly, large areas of Pittsburgh Plate Glass and Pennvernon Window Glass can contribute enormously to the appearance, brightness and functional "rightness" of public buildings of many kinds. Birdsall P. Briscoe and Maurice J. Sullivan, Associated Architects.

• We believe you will find much to interest you in our new, illustrated booklet of ideas concerning the use of Pittsburgh Glass in architectural design. Send the coupon below for your free copy.

See Announcement of Challenging Competition Pages 18 and 19

★ Design it better with **PITTSBURGH GLASS**

THE ACCEPTED LINE FOR EVERY ARCHITECTURAL USE

PITTSBURGH PLATE GLASS COMPANY

Pittsburgh Plate Glass Company
2308-4 Grant Building
Pittsburgh 19, Pennsylvania

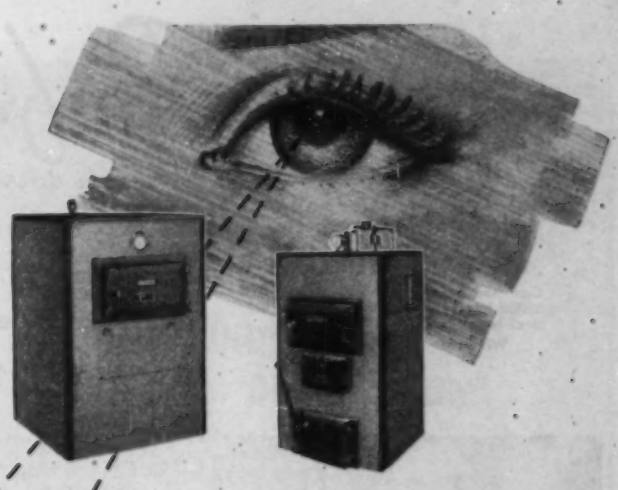
Please send me, without obligation, your new booklet entitled: "Ideas for the Use of Glass in Building Design."

Name.....

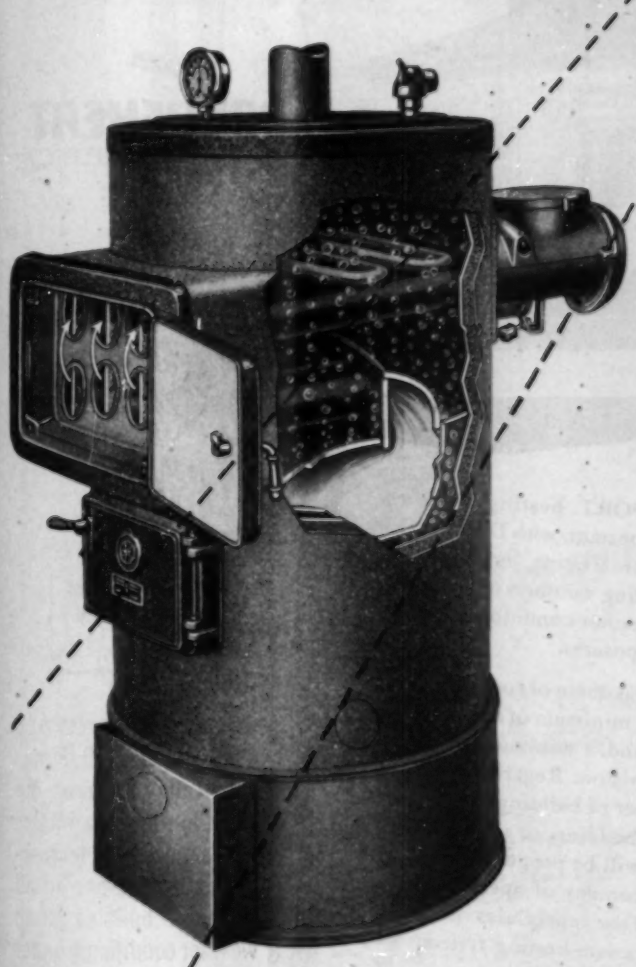
Address.....

City..... State.....

"Eye Appeal" YES...



BUT IT'S WHAT'S UNDER THE JACKET THAT COUNTS—



KEWANEE

Type "R"... Round Boiler

FOR HEATING HOMES and SMALLER BUILDINGS with OIL, GAS or COAL

(Hand or Stoker)

Note the long gas travel through the 2-pass tubes which assures all the usable heat being put to work... the generous, high fire-chamber for more complete combustion... the sturdy steel construction which adds years of life.

Jacketed or unjacketed styles... for 225 to 900 square feet steam radiation or 360 to 1400 square feet water radiation... available after war needs.

Designed by Kewanee... built in the Kewanee Plant... and sold by Kewanee Boiler Corporation's own Branches

75 YEARS BOILERMAKERS

ARMY-NAVY "E" AWARD

KEWANEE BOILER CORPORATION

KEWANEE, ILLINOIS

Branches in 60 Cities—Eastern District Office: 40 West 40th Street, New York City 18

Division of AMERICAN RADIATOR & Standard Sanitary CORPORATION

Perfection IN A SMALL "PACKAGE"

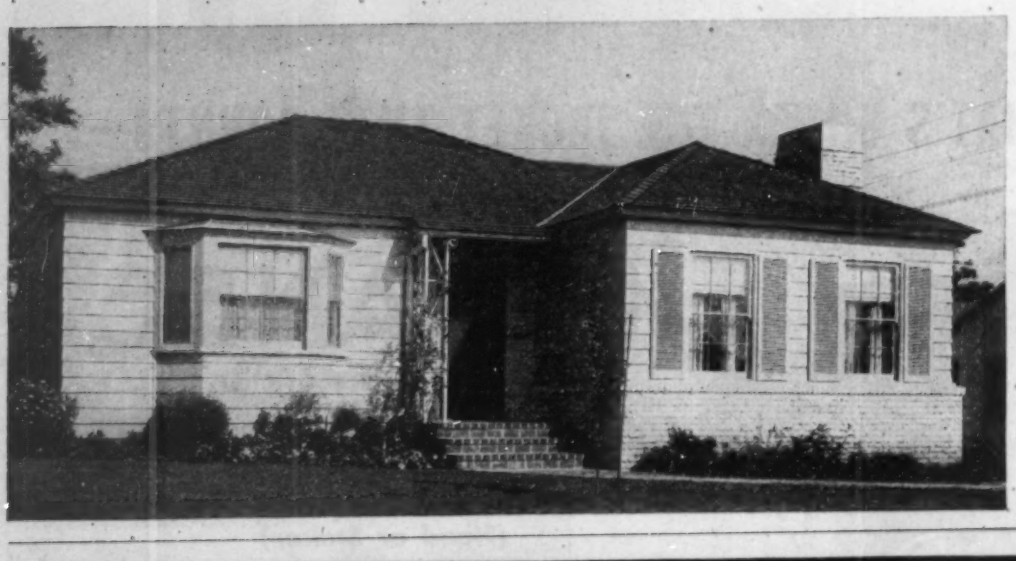
Now PAYNE introduces the successor to old-fashioned central heating:

ZONE-CONDITIONING

Gas heating and ventilating, controlled by zones or rooms. For large or small houses.

Write today for new booklet

Mere size does not determine a home's capacity to give pleasure and comfort to the owner. Witness this "gem" of a house, designed by architects *W. J. Varner* and *Herbert Mann* and built by *Noland Morris* . . . for Mrs. Louise Bergman, Los Angeles. ★ Its heating system equals, in quality and performance, that of any mansion: a compact PAYNE Forced Air Unit, one of many models for every heating need.



PAYNEHEAT

30 YEARS OF LEADERSHIP

GAS FUEL HAS EVERYTHING

Payne FURNACE & SUPPLY CO., INC.
Beverly Hills, California

© 1944 PAYNE FURNACE & SUPPLY CO., INC.

The **MOST** *of*
HEATING COMFORT
for the
LEAST AMOUNT OF FUEL AND MANPOWER

DUNHAM Differential HEATING

COMFORT heating-levels remain constant, with Dunham Differential Heating, regardless of fluctuating outdoor temperatures and weather conditions or building exposures.

The maximum of comfort is given with a minimum of fuel consumption and a minimum of manual supervision. Regardless of size or number of buildings in a project, each building, or zone of a building, will be properly heated with an economy of operation far beyond the capabilities of any pressure steam heating system.

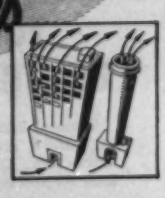
May we send you Brochure 632 entitled "High Altitude Heating"? It explains, in non-technical language, the method and advantages of sub-atmospheric steam heating.

C. A. DUNHAM COMPANY
450 EAST OHIO ST., CHICAGO 11, ILL.
Toronto, Canada — London, England

Fuel-Saving Starts With CONTROL

Only Dunham meets ALL Control needs. Differential Heating takes on the whole burden of maintaining comfort-level temperatures at all times, in all parts of a building, in all weather conditions, under variables in service and occupancy.

End WINDY-DAY Struggles



Tall buildings are like a tall chimney—they have suction draft velocities—sometimes as high as 60 m.p.h.—at the entrance.

★ Don't force people who enter your clients' buildings to struggle with swing doors on windy, winter days when wind pressure makes swing doors difficult—if not impossible—to operate.

Revolving doors eliminate "door-tugging." They are "balanced" —revolve with ease in 30 to 60 mile winds. People appreciate their convenience.

Cut Heating Costs Up to 25%

Revolving doors cut your clients' heating bills. They are draft-proof—hold cold air out; warm air in. Smaller heating units can be used, saving on initial costs.

Include Revolving Doors in your specifications for postwar buildings. Your clients will appreciate the economies and conveniences they offer. You'll find complete data in your Sweet's Catalog and we'll gladly furnish any additional information that you need. Write us.

5 Ways a Revolving Door Pays for Itself

ARMY E NAVY

1. Cuts heating and cooling costs.
2. Increases usable floor space.
3. Reduces damage from dust and dirt.
4. Assures customers' comfort.
5. Safeguards employees' health.

Revolving Door
DIVISION of
★INTERNATIONAL
★VAN KANNEL
★ATCHISON
INTERNATIONAL STEEL COMPANY
Evansville 7, Indiana

KIMBERLY *Quality*
DRAWING PENCILS
WITH *Carbo-weld* LEAD

22 Accurate degrees

DRAWING 6B to 9H
LAYOUT EX-EX-B
and
TRACING 1-2-3-4
specially developed for blueprint work

Strong uniform leads, smooth and dense—these are the essential qualities of fine drawing pencils—KIMBERLY Drawing Pencils.

Write to us—Dept. R—
for free trial pencil.
Mention your dealer.

Makers of Fine Pencils since 1889
General Pencil Company
67-73 FLEET STREET — JERSEY CITY 6, N. J.

G-E Wiring Material News

FLAMENOL*
Thermo-plastic
BUILDING WIRE
Type SN for Dry Locations

Type SNW for Wet Locations

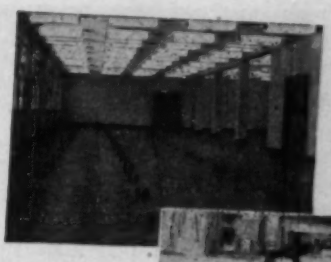
Now you can specify high quality, small diameter thermo-plastic insulated building wire for complete wiring systems. Flamenol wire meets all requirements—Type SN for dry locations, Type SNW for wet locations. It is available in sizes 14 to 1,000,000 CM.

Flamenol Building Wire's thermo-plastic insulation has long life, is flame retarding and resistant to oils, acids, etc. In addition, Type SNW insulation has low moisture absorption.

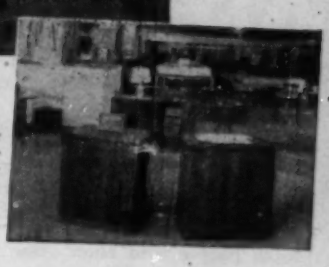
**Reg. U.S. Pat. Off.*

FOR UNDERFLOOR ELECTRICAL DISTRIBUTION

General Electric offers two types of underfloor wiring. Both give great flexibility to factories, stores, offices, etc. Electrical outlets can be preset or added later as needed.



Specify G-E Fiberduct with masonry and wood type construction.



Specify G-E Q-Floor Wiring with Robertson cellular steel Q-Floors.

Wiring Devices
FOR EVERY TYPE OF BUILDING

Switches, convenience outlets, lampholders, plates—whatever is needed for any wiring installation in any building can be found in the G-E line. These devices are all high quality—each a leader in its class. They are good looking and will give long service. Your clients are sure to be pleased with them. Specify G-E wiring devices to control the wiring in the buildings you design.

IMPORTANCE OF Adequate Wiring

Victor W. Hartley, managing director of the Pacific Coast Electrical Association, Los Angeles, Calif. says, "Wiring is a 'hidden value.' Upon its adequacy to meet the electrical needs of the occupant depends, in a substantial degree, not only the modern quality of the structure but its soundness as a long-term investment."

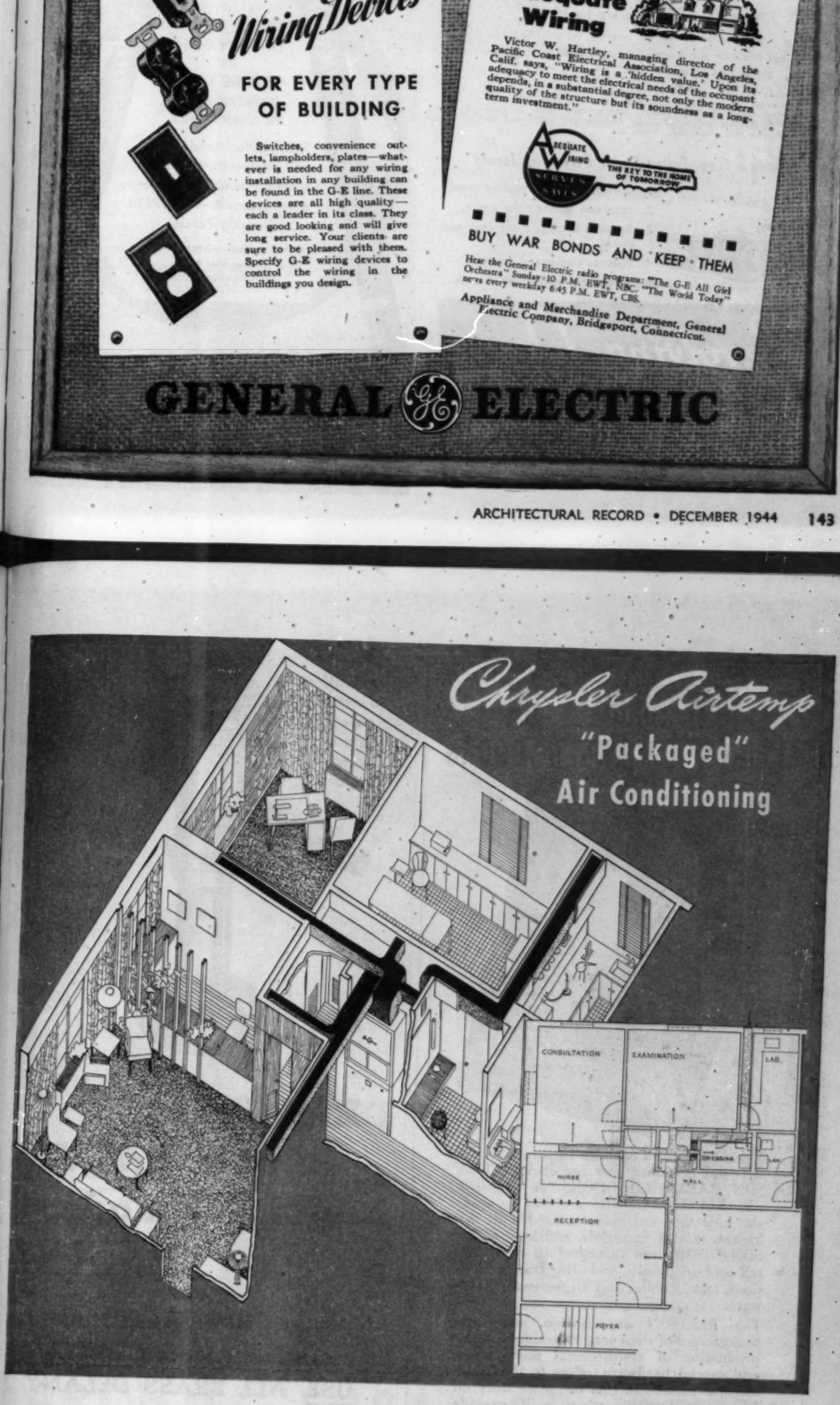
ADEQUATE WIRING SERVES WELL — THE KEY TO THE HOME OF TOMORROW

BUY WAR BONDS AND KEEP THEM

Hear the General Electric radio programs: "The G-E All Girl Orchestra" Sunday 10 P.M. EWT, NBC. "The World Today" news every weekday 6:45 P.M. EWT, CBS.

Appliance and Merchandise Department, General Electric Company, Bridgeport, Connecticut.

GENERAL ELECTRIC



An Aid to Physician and Patient

The hot, muggy days of summer cause increased tension and discomfort. That is why Chrysler Airtemp "Packaged" air conditioning is welcomed by physician and patient.

The cool, clean, dry air creates a restful, invigorating atmosphere, free from unpleasant odors. Instruments are more easily handled. In fact, throughout the profession, air conditioning is a postwar must.

Chrysler Airtemp "Packaged" air conditioners are shipped ready to run. Easy to install, flexible in application; quiet and trouble-free in performance . . . these self-contained units, singly or in multiple, are ideal for professional suites and clinics.

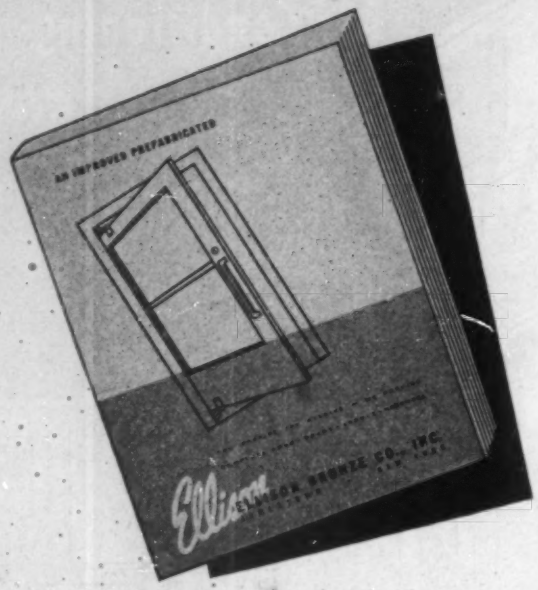
No wonder architects are turning to Chrysler Airtemp in making estimates, not only on air conditioning, but for heating and commercial refrigeration as well. Airtemp Division of Chrysler Corporation, Dayton 1, Ohio • In Canada, Therm-O-Rite Products, Ltd., Toronto.

Buy More War Bonds! Tune in Major Bowes every Thursday, CBS., 9 p. m., E. W. T.

CHRYSLER AIRTEMP

HEATING • COOLING • REFRIGERATION

NEW BOOKLET ON ELLISON BALANCED DOORS



This new booklet contains illustrations, details and specifications concerning ELLISON BALANCED DOORS. It describes why ELLISON DOORS are easy to operate, how they are manufactured with the highest quality materials, and how ELLISON DOORS are furnished in complete, self-contained units, including frames, mullions, trim, saddles and all necessary hardware.

The ELLISON organization, with the background of their long experience in the production of architectural metal work and special hardware, offers to the architectural profession this complete story on ELLISON DOORS which will provide them with solutions to their entrance door problems.

This catalog will appear in the 1945 Sweet's File Architectural, Section 15a, catalog 5.

Clip the coupon below and send with your name and address to:

ELLISON BRONZE COMPANY, Inc.

JAMESTOWN, NEW YORK

Please send me a free copy of the new booklet on ELLISON BALANCED DOORS.

Name .....

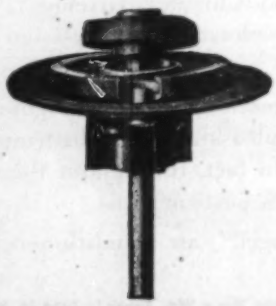
Address .....

City ..... State .....

The simplest to install, adjust, maintain and repair

DELANY FLUSH VALVES are NOW made of BRASS

We are now permitted to manufacture for CIVILIAN USE, ALL BRASS DELANY FLUSH VALVES and ALL BRASS No. 50 VACUUM BREAKERS.



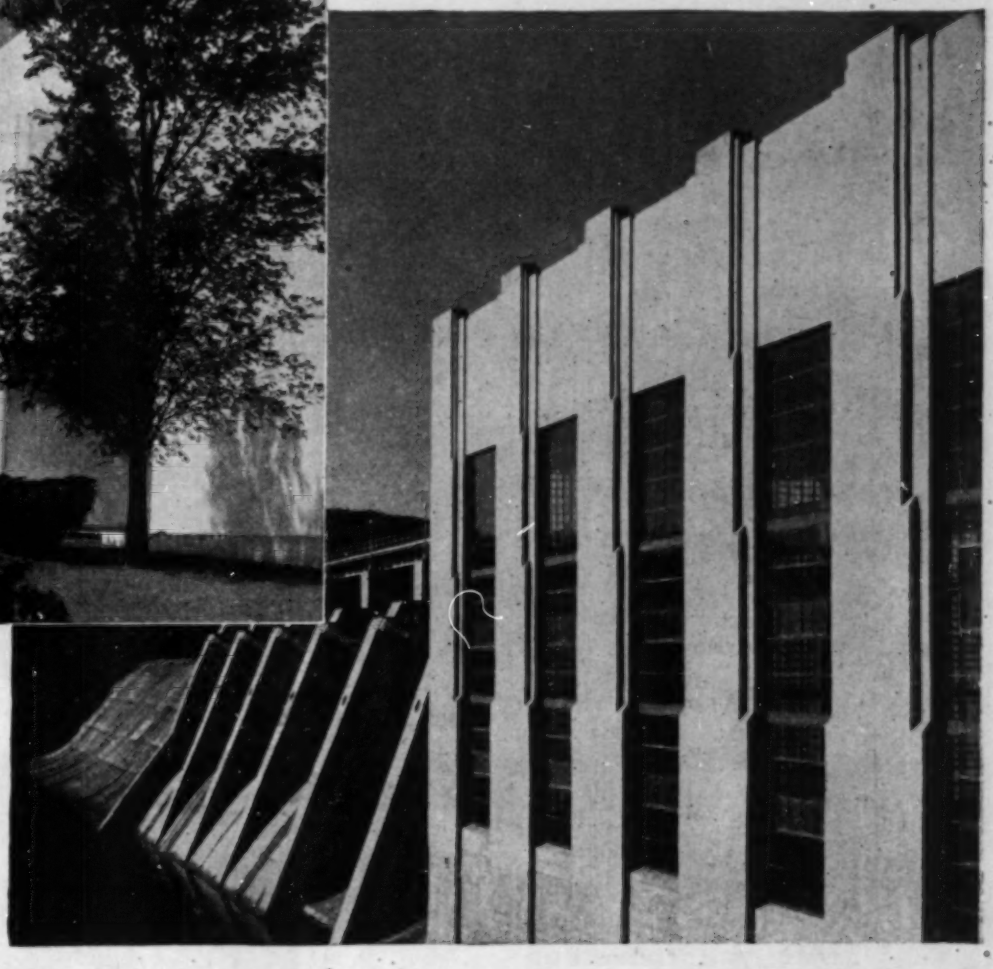
ONLY 6 MOVING PARTS

The simplicity of the Delany Flush Valve with the minimum of working parts (half those of an average valve) makes for trouble-proof installation and operation.

SINCE 1879
Coyne & Delany Co.
BROOKLYN N.Y.

Architectural concrete radio transmitter building at Wheaton, Md., E. Burton Corning, architect, and George C. Martin, contractor, both of Washington, D.C.

Dam and power house at Austin, Texas, built by Lower Colorado River Authority.



ARCHITECTURAL CONCRETE

for communications and power

Architectural concrete is especially well suited for utility buildings. Such concrete structures retain fine appearance through years of hard service.

Architectural concrete meets the most exacting design and service requirements at reasonable cost. It combines both architectural and structural functions in one firesafe, economical material.

Maintenance cost is low because concrete provides the strength and durability for hard service and the most severe weather exposure.

In addition to the advantages of strength, firesafety, long life and distinguished appearance **—concrete gives owners *low annual cost*, the true measure of construction economy.**

Literature on recent design and construction practice with architectural concrete mailed free in United States and Canada. See Sweet's Catalogue 4/33.

•

PORTLAND CEMENT ASSOCIATION
Dept. 12-8, 33 W. Grand Ave., Chicago 10, Ill.

A national organization to improve and extend the uses of concrete... through scientific research and engineering field work.

BUY MORE WAR BONDS

Remodeling?

Check the heating equipment

Is the present system overloaded?

Will the building be increased in size and thus increase the heating load?

Will the heating system be zoned?

Is the boiler old and damaged?

Are you converting to automatic firing?

NATIONAL RADIATOR
Boilers, Radiators and Convectors
are the answer and are now available
. . . Write for literature

The NATIONAL RADIATOR Co.

221 Central Avenue, Johnstown, Pa.

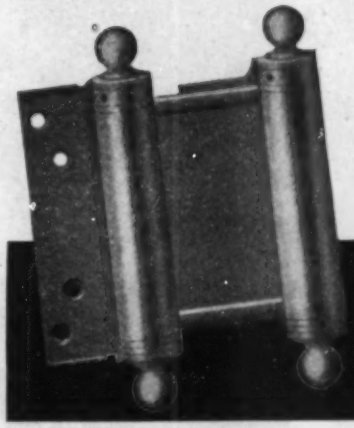
50 YEARS OF SERVICE TO THE HEATING INDUSTRY

Selected...

By Performance Tests for the Nation's Finest Buildings

Milwaukee BUILDERS HARDWARE

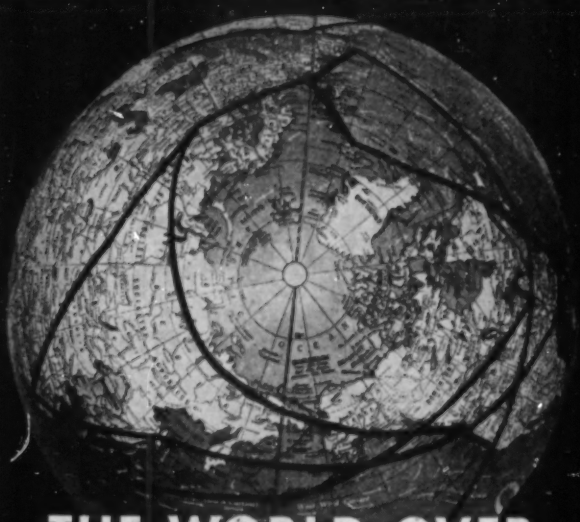
Attractive styles and designs, greater strength and durability, smoother operation, easier installation, are features of MILWAUKEE HARDWARE that contractors know and owners will appreciate. Features that recommend them to you as THE hardware to specify on your building plans.



Standardize in your specifications on MILWAUKEE BUILDERS HARDWARE. The QUALITY line of spring butt hinges, pivot hinges, lavatory hardware.

MILWAUKEE STAMPING CO.
814-B South 72nd Street
Milwaukee 14, Wisconsin

NORTH POLE TEMPERATURES



THE WORLD OVER

The shortest airplane routes are over the North Pole. The shortest road to efficient protection of perishable food is through properly refrigerated storage, protected by

JAMISON-BUILT DOORS

JAMISON COLD STORAGE DOOR CO.

Jamison, Stevenson & Victor Doors

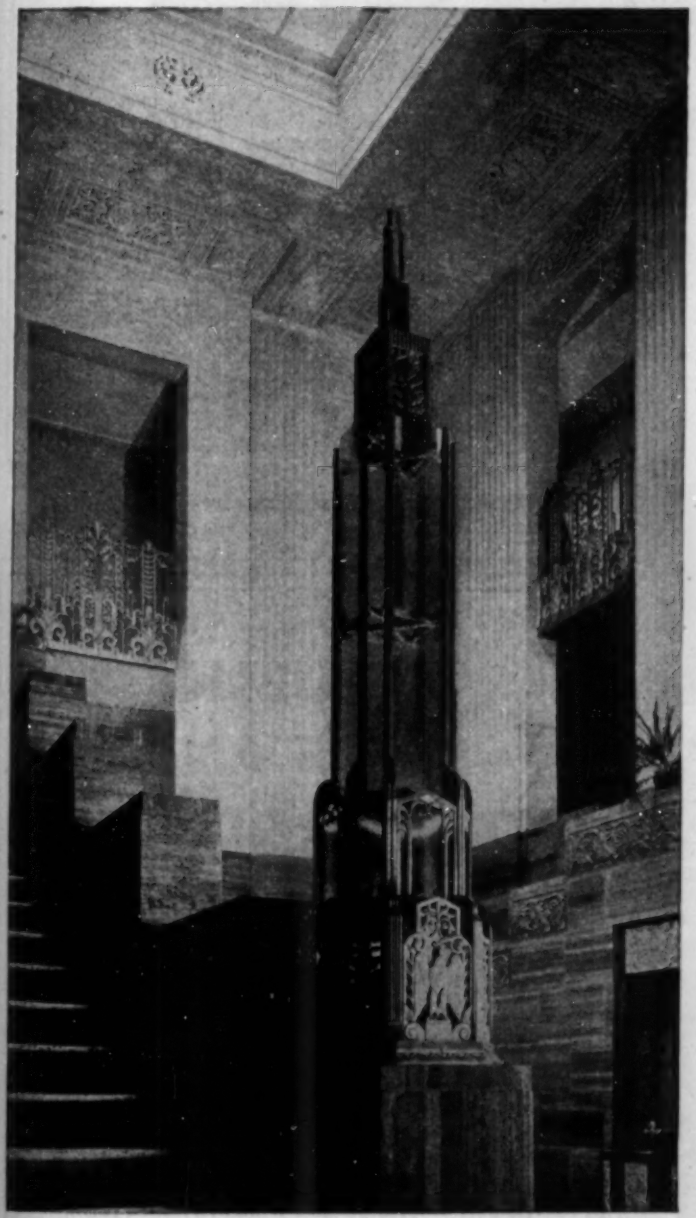
Branches in principal cities HAGERSTOWN, MD.

JAMISON-BUILT COLD STORAGE DOORS

See Our Catalog in Sweet's Catalog File

Versatile

ARCHITECTURAL METALS



. . . can be shaped to your own ideas of beauty and practicality

Versatility is one of the big reasons you specify architectural metals.

You can use them *in the way* you want, *for* what you want. They can be shaped and fabricated to your own desires.

Tomorrow . . . you will use functional design more than ever before. Architectural metals, lending themselves readily to architects' thinking, will enable you to achieve the effects you want, not only from the decorative angle but from the purely utilitarian angle as well.

Architectural metals, ferrous and non-ferrous, offer you a wide choice. There are many different materials — many qualities, colors and characteristics.

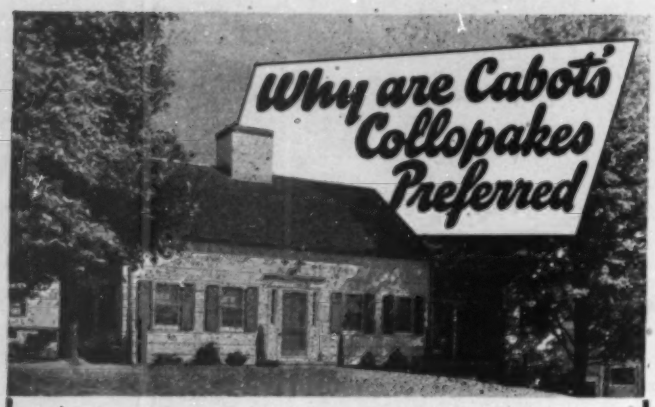
Fabricators of architectural metals are anxious to assist you in detailing—as you plan now for tomorrow's peace-time building. Write today for Directory of Leading Architectural Metal Fabricators. Address Dept. **R-12.**

NATIONAL ASSOCIATION OF

ORNAMENTAL METAL

MANUFACTURERS

209 CEDAR AVENUE **WASHINGTON 12, D. C.**



...BY LEADING ARCHITECTS ?

Because Cabot's Collopakes give greater protection and more hiding power per gallon than ordinary paints.

Because they last longer than ordinary paints—cost less in the long run.

Because pigments are 100 to 1000 times finer due to the exclusive "Collopaking" process and are inseparably united with long lasting, life giving oil.

Because only the purest paint pigments go into their making, assuring you of rich lively colors that hold their glowing beauty for years.

FREE! "The Little White Book"—gives complete information about Cabot's prize-winning Collopakes. Write for your copy and color card today. Samuel Cabot, Inc., 1288 Oliver Bldg., Boston 9, Mass.

Cabot's Gloss Collopakes and DOUBLE-WHITE

In electrical wiring of buildings, the costly custom of using No. 14 wire has blocked progress toward adequate wiring like the sacred cow on an Indian road. The Hindu, you recall, reveres the cow and will not disturb it, regardless of time or place. But, if our buildings of tomorrow are to have proper wiring, then sacred cows like No. 14 must yield to progress. Nothing smaller than No. 12 wire should be used. Anaemic circuits have deprived many a building of full use of available power. To take full advantage of the electrical world of tomorrow, wiring must be planned with an eye to the future for the greater use of electrical equipment. The Okonite Company, Passaic, New Jersey.

OKONITE and HAZARD
insulated wires and cables

3864

An advancement IN TILING

MIRACLE ADHESIVES

THE SUCCESSOR TO WET MORTAR

designed

TO ELIMINATE USELESS WASTE— WEIGHT—WATER— MATERIAL — DEBRIS —and LABOR

Let us tell you more about this
THIN BED METHOD OF TILING

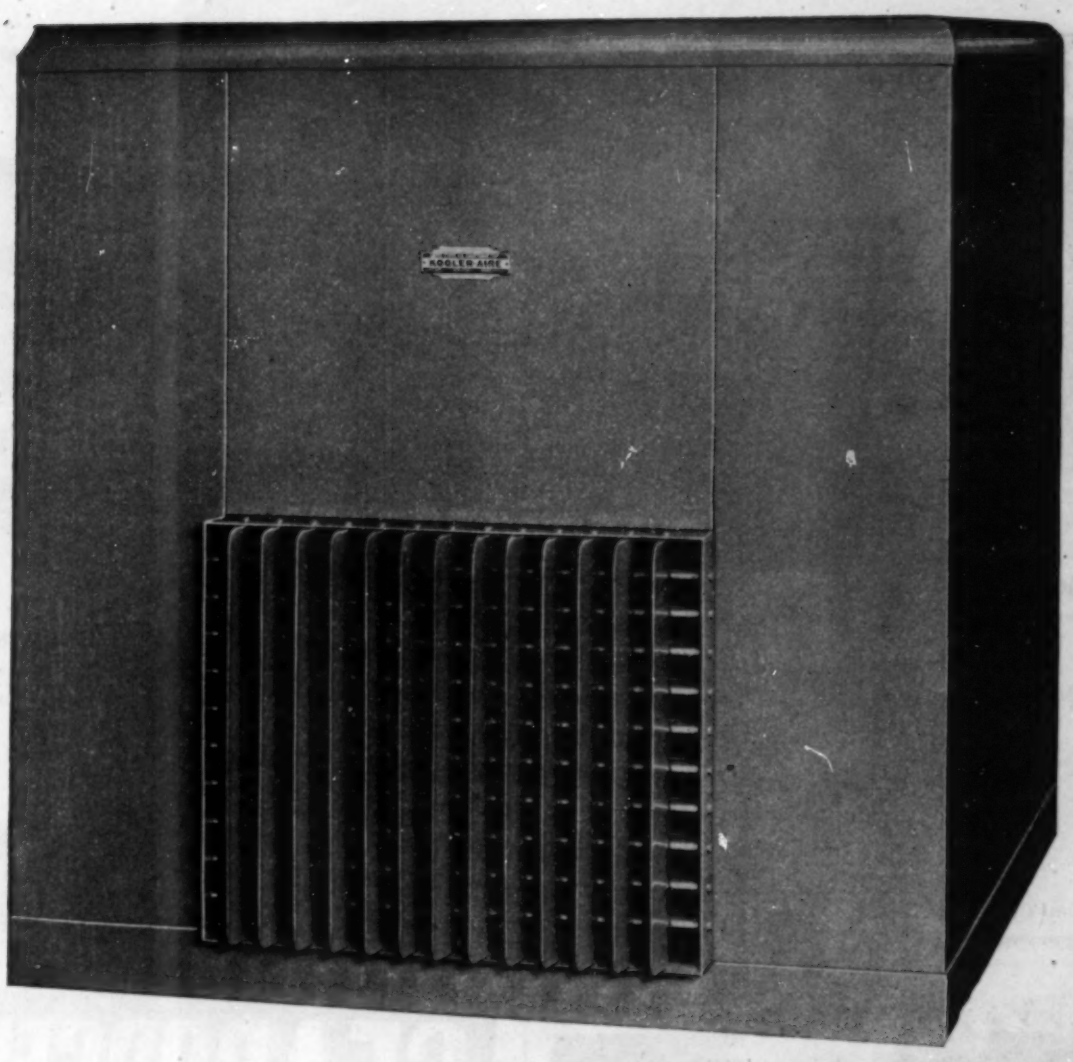
MIRACLE ADHESIVES CORP.
852 CLINTON AVENUE, NEWARK 8, N. J.

REPUBLIC STEELS AND STEEL PRODUCTS

See Sweet's Architectural File or write us for detailed information on Republic Pipe—Enduro Stainless Steel, Toncan Enameling Iron and other Sheet Products—Roofing—Electrical Metallic Tubing (Conduit)—Truscon Steel Windows, Doors, Joists, Roofs and other items.

REPUBLIC STEEL CORPORATION
General Offices: Cleveland 1, Ohio

Berger Manufacturing Division • Culvert Division
Niles Steel Products Division • Steel and Tubes Division
Union Drawn Steel Division • Truscon Steel Company
Export Department: Chrysler Building, New York 17, N.Y.



TODAY'S PRODUCTION...

All America can look forward to products of superior quality when the war effort is no longer the major customer of U. S. industry. For in meeting the exacting specifications of Army, Navy and Maritime Commission, men are designing and building better. Here at USAIRCO, while taking the daily task in stride, we're planning to serve American Retailers better by developing greater values in low-cost comfort cooling. Right now is a good time to get complete information on Kooler-aire Evaporative Cooling, and Refrigerated Kooler-aire. Data promptly furnished on request.

UNITED STATES AIR CONDITIONING CORPORATION

NORTHWESTERN TERMINAL • MINNEAPOLIS, MINNESOTA

BLOWERS • COILS • COOLING SYSTEMS • EXHAUSTERS • FANS • HEATERS • WASHERS • WHEELS

Is This Destruction Necessary?

Protection for so little. One Grinnell Sprinkler Head protects 100 square feet of building space. Installed, it requires only about 50 lbs. of pipe, fittings, hangers and valves to serve it, yet it can save tons of structural steel and other critical materials.

Why take chances when protection requires so little?

Call in an experienced Grinnell engineer to help you protect your warehouse or plant against fire. Grinnell Co., Inc., Executive Offices, Providence, R. I. Branch offices in principal cities

GRINNELL

AUTOMATIC SPRINKLERS *for Production Protection*

Curtis Woodwork to fit your needs

STOCK Architectural Woodwork by Curtis brings distinctive beauty—lasting value—to the homes you plan. Curtis Woodwork adds the "extra something" that increases home value—yet thanks to Curtis production methods, its cost is low or moderate. The broad Curtis line offers woodwork for any style or size of home, provides the authentic architectural styling which modern taste demands. Write us for full information.

1866 CURTIS WOODWORK

CURTIS COMPANIES SERVICE BUREAU
Clinton, Iowa

VERD-A-RAY SPONSORS

SLOGAN CONTEST!

$5,000.00 IN PRIZES

ASK YOUR WHOLESALER OR WRITE DIRECT

VERD-A-RAY CORP., Toledo 5, Ohio

SEAPORCEL

a tough ceramic coating bonded to metal

for the STORES and BUILDINGS of TOMORROW

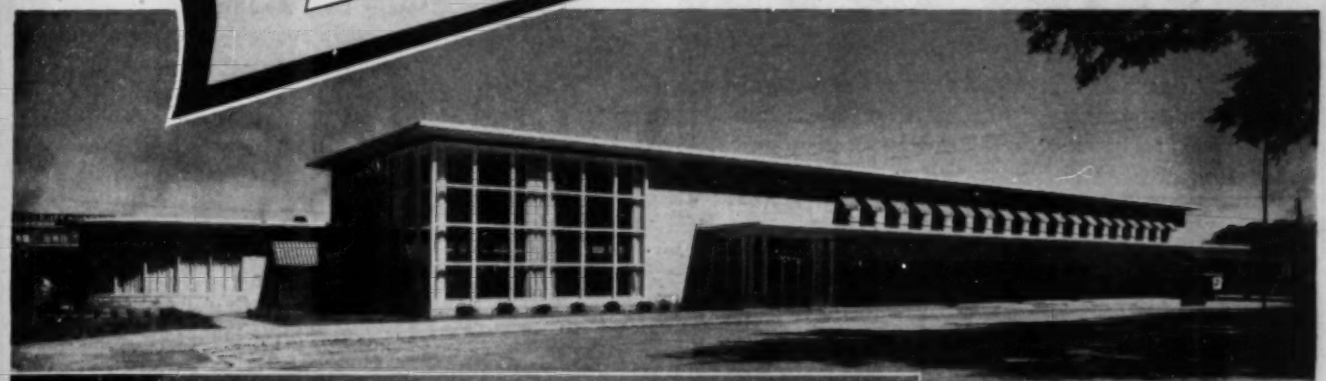
Widely used before hostilities diverted manufacturing to war demands. Now better than ever because of our experience with SEAPORCEL in marine use. Requires only washing with soap and water to restore its original lustre and color after years' service. See Sweet's Catalog for details, 1943, Section 13/9; 1944, Section 6/11.

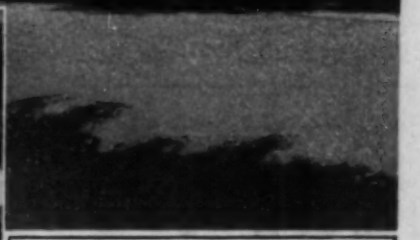
We're on war work now — but ready for peace.

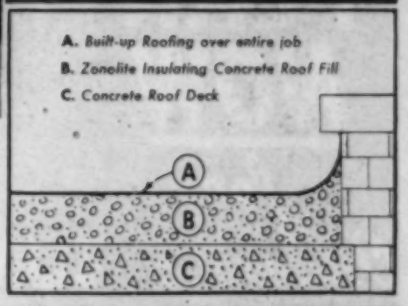
SEAPORCEL PORCELAIN METALS, INC.
28-00 Borden Avenue, Long Island City 1, N. Y.
Formerly Porcelain Metals, Inc.

ZONOLITE CONCRETE INSULATES BURLINGTON'S NEW R.R. STATION

HOLABIRD & ROOT, Chicago—*Architects*
LOVERING CONSTRUCTION CO.
St. Paul, Minn. · *General Contractors*







Zonolite Insulating Concrete Provides Permanent, Fireproof Roof Insulation

The fast-growing list of hundreds of modern structures insulated with Zonolite Concrete adds another outstanding building with the completion of this distinctive station of the Chicago, Burlington & Quincy Railroad at Burlington, Iowa. On this job the structural concrete roof deck was covered with 2 inches of Zonolite insulating concrete roof fill.

Zonolite concrete was chosen for its permanence, light weight, fire protection, and superior insulation. It is easily formed into cants, saddles and slopes to give proper roof drainage. You should have a copy of the new 86-page manual "Zonolite Concrete," giving detailed information on what it is (with complete physical properties) and how used (full illustrations and drawings). Mail coupon for your free copy.

UNIVERSAL ZONOLITE INSULATION COMPANY, Dept. AR-124, **135 S. La Salle St., Chicago 3, Ill.**

A ZONOLITE PRODUCT FOR EVERY INSULATION REQUIREMENT

CONCRETE AGGREGATE: Replaces sand—to make a permanent, fireproof, rotproof, lightweight insulating concrete.

PLASTER AGGREGATE: For lightweight, fireproof plaster of high insulating and sound deadening qualities.

HOME INSULATION: Granular fill permanent type of high efficiency.

Prompt Deliveries from 22 Plants

ZONOLITE
INSULATION
Permanent as the Earth Itself

Mail Coupon for
FREE 86-PAGE BOOK!

UNIVERSAL ZONOLITE INSULATION CO.
Dept. AR-124, 135 S. La Salle St., Chicago 3, Ill.

Gentlemen: Please send me your 86-page manual on Zonolite Concrete. Also literature on Zonolite Plaster and Granular Fill Insulation.

Name.....

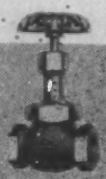
Address.....

City.....*Zone*.....*State*.....

Please check: ☐ Architect ☐ Engineer ☐ Draftsman ☐ Contractor

A Record to be Proud of

It's pretty hard to get all steamed up over a product as prosaic as a valve, but when you realize that thousands of Jenkins Valves have been on the job up to 50 years and more, you'll have to admit that a bit of enthusiasm is justified. And when you consider what a small difference there is between the first cost of Jenkins Valves and cheap ones, you're bound to agree that "It Pays to Standardize on Jenkins". Jenkins Bros., 80 White St., New York, 13, N. Y.



JENKINS VALVES

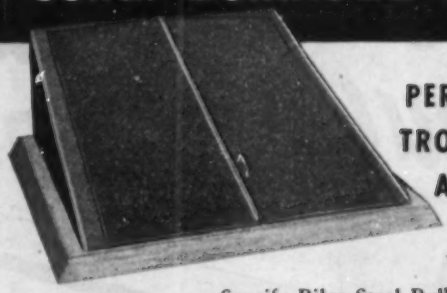
For every industrial, engineering, marine and plumbing-heating service . . . In Bronze, Iron, Cast Steel and Corrosion-resisting Alloys . . . 125 to 600 lbs. pressure.

SINCE 1864

Specify BILCO

COPPER STEEL

Cellar Bulkhead Doors



PERMANENTLY TROUBLE-FREE, ATTRACTIVE, STURDY

Automatic Safety Catch

Specify Bilco Steel Bulkhead doors for the modern home. They are easy to install on all types of construction, give a lifetime of protection and work smoothly always. Can't be blown or knocked shut. Touch of the hand or foot operates automatic safety catch. Strong steel bolt locks doors securely. Three stock sizes. Deliveries depend on steel availability. Write for free folder.

BILCO MANUFACTURING COMPANY

Copper Steel Bulkhead Doors

164 Hallock Ave., New Haven, Conn.

STEEL ROOF SCUTTLES SIDEWALK DOORS

PLAN NOW for Oildraulic ELEVATORS

DELETE PENTHOUSES • SUPPORTING COLUMNS • OPERATION IS ALWAYS SMOOTH • SAFE • SIMPLE

Rotary Lift Company
1031 Kentucky St., Memphis 2, Tenn.
Please send me the free booklet RE-301 containing complete Architect's layout and specification data on Rotary's electrically operated Oildraulic Elevators.
Name
Firm
Address
City State

ROTARY LIFT CO.

CLIP AND MAIL Coupon for Complete FREE Architects File A.I.A. 33

ARE YOU in a RUT?

Mr. Pencil Technician, if your creative talents are not hitting on all cylinders, try changing to

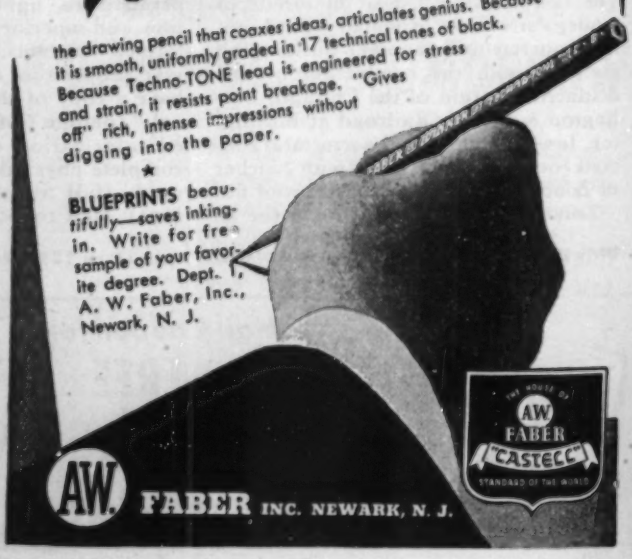
WINNER

Techno-TONE

the drawing pencil that coaxes ideas, articulates genius. Because it is smooth, uniformly graded in 17 technical tones of black. Because Techno-TONE lead is engineered for stress and strain, it resists point breakage. "Gives off" rich, intense impressions without digging into the paper.

★

BLUEPRINTS beautifully—saves inking-in. Write for free sample of your favorite degree. Dept. T, A. W. Faber, Inc., Newark, N. J.



AW FABER INC. NEWARK, N. J.

20 MANUFACTURERS will make Gas Ranges bearing this SEAL OF APPROVAL

A-B STOVES, INC.
AMERICAN STOVE CO.
CALORIC GAS STOVE WORKS
CRIBBEN & SEXTON CO.
DETROIT-MICHIGAN STOVE CO.
THE ESTATE STOVE CO.
GLENWOOD RANGE CO.
JAMES GRAHAM MFG. CO.
GRAND HOME APPLIANCE CO.
HARDWICK STOVE CO.
A. J. LINDEMANN & HOVERSON CO.
O'KEEFE & MERRITT CO.
ROBERTS & MANDER STOVE CO.
GEO. D. ROPER CORP.
STANDARD GAS EQUIPM'T CORP.
THE TAPPAN STOVE CO.
WESTERN STOVE CO., INC.

IN CANADA

CLARE BROS. & CO., LTD.
GURNEY FOUNDRY CO., LTD.
MOFFATS, LTD.

cp

TRADE-MARK OF THE ASSOCIATION OF GAS APPLIANCE AND EQUIPMENT MANUFACTURERS

This is the Seal of Approval you will see spotlighted in model homes and showrooms all over the United States and Canada. For Gas Ranges bearing this Seal will be built to the newest and highest performance specifications of home economists and engineers—and pretested by world famous laboratories to provide a certified buying guide. And it is the buying guide women will look for—$6,000,000 is being spent to tell them.

For complete information about Gas Ranges bearing the "CP" Seal, ask your dealer or Gas Company or write Association of Gas Appliance and Equipment Manufacturers, 60 East 42 Street, New York 17, N. Y.

Gas

THE FLAME THAT WILL BRIGHTEN YOUR FUTURE

SYNCHRO-START

An Eminent Refrigeration Authority says

"No diesel installation is satisfactory for refrigeration unless it is subject to full automatic control."

There is only one FULL AUTOMATIC CONTROL for refrigeration, airconditioning, fire and flood protection, oil well, mine, sewer, subway, sump and tunnel pumping, main, auxiliary and emergency power generating, airport lighting, bridge operation, etc.,—whether powered by gas, gasoline or diesel engine,—SYNCHRO-START AUTOMATIC ENGINE CONTROLS.

Ask your engine manufacturer or write us today for complete information.

SYNCHRO-START PRODUCTS
221 E. Cullerton St., VICtory 1435, Chicago 16, Ill.

AUTOMATIC ENGINE **CONTROLS**

---

by One Allen Ventilating Unit . . .

Ventilation that does the job comes first with Allen. Close on the heels of that consideration comes lowered cost to the buyer. Only when we click on both are we satisfied, because only then do we know we've done a job.

Basically better ventilation engineering has enabled Allen to furnish industry with more than four thousand Allen Type "H" Roof Fans at an average saving of $62.50 per unit over the nearest comparable equipment—more than a quarter million dollars.

The explanation is simple. Allen patents cover the use of dampers balanced in the effluent air stream—open when the fan is running, closed automatically when power is off. This is in contrast to construction used by several other manufacturers wherein mechanical, motor-operated dampers are mandatory and up the cost.

Approximately 400 of these Allen units top the huge Willow Run Bomber Plant alone. Allen has an answer for your ventilation problem, too, whether it's ordinary or extraordinary. Let's talk it over. *The Allen Corporation, 9751 Erwin Avenue, Detroit 13, Michigan.*

THE *Allen* CORPORATION

ENGINEERED VENTILATION FOR INDUSTRY

WIRING DEVICES
1890 **H&H** 1944
MOTOR CONTROL

SYMBOL OF QUALITY
IN WIRING DEVICES AND CONTROL APPARATUS
for 54 years

Available now for dependable control of light, heat and power if ordered with proper priorities . . . Send for current Catalogs for war service installations.

HART & HEGEMAN DIVISION
ARROW-HART & HEGEMAN ELECTRIC COMPANY, HARTFORD, CONN.

Horn

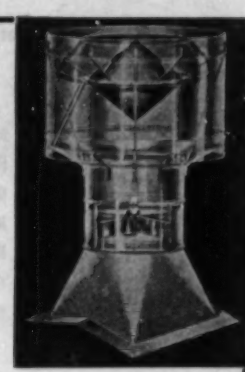
FOLDING SEATS AND FOLDING PARTITIONS

are definitely a part of modern gymnasium design

Our new 48 page book, "POSTWAR PLANNING for SCHOOLS", just off the press, shows these important Horn units in action as specified by leading architects throughout the Nation. Get your copy — select the arrangement that best fits your needs and then permit our engineers to work with you and your architect in planning a flexible gym layout. Write Dept. 112.

HORN MANUFACTURING COMPANY
FORT DODGE, IOWA

BURT
Free-Flow Fan
VENTILATORS



MOVE AIR *Fast*

When a large volume of air must be exhausted *quickly*, specify BURT Free-Flow Fan Ventilators. They move many times the air that gravity ventilators will handle —move it with unusual efficiency, due to BURT's exclusive Free-Flow construction that eliminates turbulence and reduces friction losses within the head to a very low point. Ventilator discharge is vertically upward — protecting the roof from exhausted smoke or fumes — a feature that appeals to plant maintenance men. See Sweet's for additional details or write BURT for catalogs and data sheets.

THE BURT MFG. CO.
ROOF VENTILATORS • OIL FILTERS
EXHAUST HEADS
177 So. Main St., Akron 11, Ohio

SEND FOR CATALOGS
•
Burt Engineers are glad to help on plans

SPOT
SASH CORD
REG. U. S. PAT. OFF.

is

TOPS
in *Value*

REG. U. S. PAT. OFF.

SAMSON CORDAGE WORKS
BOSTON 10, MASS.
Availability somewhat limited by war conditions

MILWAUKEE PREFAB PARTITIONS MEAN OCCUPANCY IN RECORD TIME!

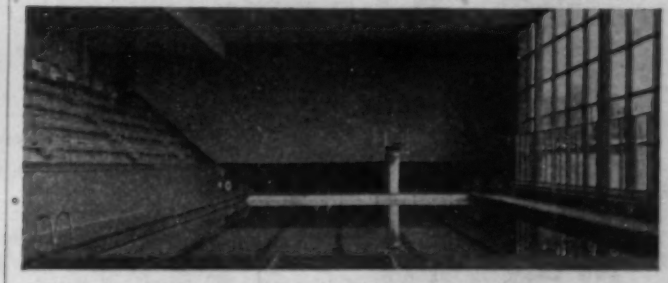
THERE'S less time lost between plan and completion when you specify MILWAUKEE PREFAB Partitions for toilet, washroom and other partitioning in new buildings and remodeling.

Milwaukee Prefab Partitions are delivered to the job all ready to set up. Your contractors save both time and labor, because there are fewer parts to handle, and these parts go together easily, simply, accurately, in surprisingly short time. There's no need for extra measuring, cutting, drilling, hardware fitting, or finishing. And you'll be proud of the finished job, attractive, sturdy, rigid, designed for beauty, sanitation, and long life.

• If your files do not already contain full specifications on Milwaukee Prefab Partitions, we shall be glad to send them.

MILWAUKEE STAMPING CO.
814-P SOUTH 72nd STREET
MILWAUKEE 14, WISCONSIN

MANUFACTURERS OF FAMOUS FERRO-METAL PARTITIONS



SWIMMING POOL CHLORINATION and WATER TREATMENT

"BLUEPRINT NOW!"

W & T Chlorinators, Ammoniators, Dry Chemical Feeders, Chemical Reagent Feeders, Chlorine Residual and pH Testers, essential for purification and treatment of swimming pool water, are available for projects carrying priority ratings.

Our SERVICE ORGANIZATION is always willing to cooperate with architects and engineers to keep present installations in operation.

Why not "Blueprint Now" for post war work? W&T Swimming Pool Technical Publications are available. We invite your inquiry.

WALLACE & TIERNAN
COMPANY, INC.
Manufacturers of Chlorine and Ammonia Control Apparatus
NEWARK 1, NEW JERSEY
Represented in Principal Cities

INDEX TO ADVERTISEMENTS

Catalogs of concerns marked (s) are filed in Sweet's File (1944)

s Airtemp Division 145
s Allen Corporation 156
s Aluminum Company of America 43
s American Brass Company 117
s American Steel & Wire Company 132
s Anaconda Copper Mining Co... 117
s Arketex Ceramic Corporation ... 27
s Armstrong Cork Company..... 14
s Arrow Hart & Hegeman Electric Co. 156
Association of Gas Appliance & Equipment Manufacturers ... 155

s Barber-Colman Company 124
s Bennett-Ireland, Inc. 116
Bethlehem Steel Company 136
s Bilco Manufacturing Company .. 154
Bird & Son, Inc. 38
Blodgett, G. S., Co., Inc. 106
s Burt Mfg. Co. 157
s Byers, A. M., Company 4

s Cabot, Samuel, Inc. 150
s Carrier Corporation 46
s Coco Steel Products Corporation 44-45
s Celotex Corporation ..... 3rd Cover
s Chrysler Corporation 145
s Congoleum-Nairn, Inc. 33
Connecticut Telephone & Electric Division 54
Coyne & Delany Company 146
Crane Company 36
s Curtis Companies Service Bureau 152

s Douglas Fir Plywood Assn. 140
Dow Chemical Company 11
s Dravo Corporation 1
s Dunham, C. A. Company 142

Electric Storage Battery Co. ... 52
s Electo Metallurgical Company .. 34
Ellison Bronze Company, Inc. .. 146

Faber, A. W., Inc. 154
s Flat Metal Manufacturing Co. .. 12
s Fir Door Institute 55
s Firecraft Door Company 121
s Fitzgibbons Boiler Company, Inc. 56
s Formica Insulation Company ... 51
s General Bronze Corporation ... 26
s General Electric Air Conditioning 15
s General Electric Lighting 40-41
General Electric Company, Plastics 105
s General Electric Wiring 143
General Fireproofing Company . 107
General Fittings Company 25
General Pencil Company 144
s Great Lakes Steel Corporation.. 35
s Grinnell Company, Inc. 152

s Hart & Hegeman Division 156
s Holophane Company, Inc. 137
s Holtzer-Cabot Division 22
s Horn Manufacturing Co. 156

s Imperial Brass Mfg. Co. 6
s International Boiler Works Co. . 112
s International Steel Company ... 144

s Jamison Cold Storage Door Co.. 148
Jenkins Bros. 154
s Johns Manville 159
s Johnson, John A. Contracting Corp. 2-3

s Kennedy, David E., Inc. 114
s Kewanee Boiler Corporation ... 141
s Kimberly-Clark Corporation ... 119
s Koppers Company 21

L C N Door Closers 111
s Libbey-Owens-Ford Glass Company 109
s Louisville Cement Co., Inc. 13

s Mengel Company 8
s Mesker Brothers 28-29
s Miller Company .....2nd Cover
s Milwaukee Stamping Co. ...148-157
s Miracle Adhesive Corporation .. 150

National Association of Ornamental Metal Manufacturers. 149
s National Electrical Manufacturers Association 16-17
s National Radiator Co. 148
Norton Lasier Company 111

Okonite Company 150

Payne Furnace & Supply Company Inc. 142
s Petroleum Heat & Power Company 32
s Pittsburgh Corning Corporation, 18-19-48-49
s Pittsburgh Plate Glass Company 18-19-48-49-138-139
s Portland Cement Association .. 147
s Powers Regulator Company ... 128
s Price Brothers Co. 47
Prox Frank Company, Inc. 125

s Radio Corporation of America .. 127
s Republic Steel Corporation 150
s Revere Copper & Brass, Inc..134-135
s Robertson H. H. Co. 30-31
s Roddis Lumber & Veneer Co. .. 23
s Rotary Lift Company 154
s Ruberoid Co. 37

s Samson Cordage Works 157
s Seaporcel Porcelain Metals, Inc.. 152
s Sedgwick Machine Works, Inc... 122
s Sisalkraft Co. 108
Sloan Valve Company ....4th Cover
Smith, H. B. Company, Inc. ... 42
s Spencer Turbine Company 120
s Stewart Iron Works Co., Inc.... 126
s Stran Steel Division 35
s Surface Combustion Corp. 39
s Sylvania Electric Products, Inc... 123
Synchro-Start Products, Inc. ... 156

s Tar & Chemical Division 21
s Tile-Tex Company 24
s Trane Company 50

s Union Carbide & Carbon Corporation 34
s United States Air Conditioning Corporation 151
s United States Plywood Corporation 8
s United States Steel Corporation Subsidiaries 126-132
s Universal Zonolite Insulation Co. 153
s Universal Atlas Cement Co. ... 126
s Upson Company 113

s Verd-A-Ray Corporation 152

s Wallace & Tiernan Company, Inc. 157
s Webster, Warren & Company.. 115
s Westinghouse Electric Elevator Company 53
s Westinghouse Electric & Mfg. Company 9
s Westinghouse Electric & Mfg. Co., Lamp Division 133
Weyerhaeuser Sales Company 130-131
White-Rodgers Electric Company 110
Wing, L. J. Mfg. Co. 118
s Wiremold Company 128

s York Corporation 129

NEW YORK—General Manager: H. Judd Payne. Advertising Manager: Tom Tredwell. B. B. Orvis, 119 West 40th Street. BOSTON—Robert Marshall, 855 Park Square Bldg.; CHICAGO—C. B. Riemersma, Jack Casey, 700 Merchandise Mart; CLEVELAND—John C. Jackson, 321 Hanna Bldg.; LOS ANGELES-SAN FRANCISCO—Blanchard-Nichols, Inc.; PHILADELPHIA—Tom Tredwell, 1321 Arch St.

What makes a good roofer?

TO state it flatly, it is our opinion that a good roofer is one who is possessed of a constitutional inability to do a poor job. Neither to meet a price nor to cut costs will he in any way tolerate the use of inferior materials or careless workmanship.

This is the type of roofer Johns-Manville wants and has succeeded in getting to join the ranks of its Approved Built-Up Roofing Contractors.

In addition—this is implied in the above qualification—J-M roofers must have integrity—they must occupy a respected position in their community and enjoy high standing with architects and general contractors. They must have experience—their standard of workmanship, as shown by actual jobs, must have the approval of J-M engineers. They must have financial stability—their business must be well established and they must be responsible for their work.

J-M's Interest Goes Beyond the Sale

From the foregoing you can see that Johns-Manville places a lot of importance on the selection of its Approved Built-Up Roofers. And rightly so, and for these reasons:

First, J-M has a vested interest in its roofing products even after they are sold. For J-M insists they be applied in the right way and according to the tested practice of the company's 86 years in the roofing industry.

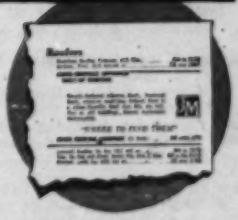
Then, Johns-Manville invests a considerable sum in co-operating with and helping its roofers, and naturally, it does not want to waste time or money in backing the wrong horse.

Again, Johns-Manville recently has initiated, for the benefit of building owners, a comprehensive roof survey service.

This survey, to get the desired results, requires intelligence and energy on the part of all its roofers.

Then, Johns-Manville constantly is developing new roofing materials and methods to provide for future needs and conditions. This means that its roofers must be progressive and able to learn and use new and improved roofing techniques and products.

Finally, roofing is but one of the many products Johns-Manville furnishes to industry, and the reputation these products have established makes it imperative that J-M Roofings be of the same high quality and that they be properly applied by capable reliable contractors.



You can identify the Approved J-M Roofing Contractor by this yellow and blue sign . . . and by this Johns-Manville Trade Mark Heading in the Classified Telephone Directory under "Roofers."

So, in specifying a Johns-Manville roof, you obtain not one but two advantages—quality materials—and what is equally important—good workmanship.

But why not get the full story? Write for Booklet BU-30A. It contains complete information, drawings, and specifications. Address Johns-Manville, 22 East 40th Street, New York 16, N. Y.

Johns-Manville *Asbestos* BUILT-UP ROOFS

ARCHITECTURAL RECORD

Published by F. W. Dodge Corporation, 119 West 40th Street, New York 18.

Copyright 1944. All rights reserved.

SEMI-ANNUAL INDEX • VOLUME 96 • JULY-DECEMBER 1944

BTS—Building Types Study • TSS—Time-Saver Standards

A

Abel, Joseph H., archt. Diplomat Apartments, Washington, D. C.—Oct., p. 75; Prince George Apartments, Hyattsville, Md.—Oct., pp. 76-77.
Abrahams, David J., archt. Postwar design for house in Mass.—July, pp. 76-77.
Ackerman, Frederick L., archt. Staff house for physicians, Riker's Island, N. Y. C.—July, p. 89.
Acoustical Planning for the Motion Picture Theater Auditorium. Abstract of article in Journal of Society of Motion Picture Engineers, entitled "Coordinating Acoustics and Architecture in the Design of the Motion Picture Theater," by C. C. Potwin and B. Schlanger. TSS—July, pp. 107-108.
Aero Digest. See "Airplanes, Airports Make the Great Air Age."
Ahlschlager, Walter W., archt. Mercantile Natl. Bank Bldg., Dallas, Tex.—July, pp. 54-65.
Ainsworth, George. See "The Lighting of Merchandise."
"Airplanes, Airports Make the Great Air Age." Article by the Editors of Aero Digest—Dec., pp. 78-83.
Airports. See "Airplanes, Airports Make the Great Air Age."
Allen, Roger, archt. Proposed fire house, Grand Rapids, Mich.—July, p. 103.
Altar, Trinity College Chapel, Washington, D. C. Maginnis and Walsh, archts.—Sept., p. 89.
American City, The. Architectural Record collaboration with. See MUNICIPAL BUILDINGS.
American Legion Memorial Building, Proposed, Hamden, Conn. Westcott & Mapes, Inc., archts. and engnrs.—July, p. 99.
Apartment House in Sao Paulo, Brazil. Gregori Warchavchik, archt.—Oct., pp. 88-89.
Apartments—Oct., pp. 71-92.
"Architecture and Religious Tradition." Article by Charles D. Maginnis, F.A.I.A.—Sept., pp. 89-91.
Arlington Hospital, Arlington, Va. Buckler & Fenhagen, archts.—Aug., pp. 104-106.
Asbury-First Methodist Church, Postwar Plan for, Rochester, N. Y. Wenner and Fink, archts.—Sept., pp. 100-102.
Asplund, E. Gunnar, archt. Holy Cross Chapel, Stockholm, Sweden—Sept., p. 84.

B

Baha'i Temple, Wilmette, Ill. Louis J. Bourgeois, archt.—Sept., p. 112.
Bailey, Van Evera, archt. House for Mr. and Mrs. W. H. DeGraaff, Portland, Ore.—Nov., pp. 64-67.
Bamberger's, Newark (photo). Raymond Loewy, designer—Nov., p. 104.
Barber & McMurry, archts. Immanuel Baptist Church, Knoxville, Tenn.; Church Plan for Research; Chapel for Methodist Church, Lake Junaluska, N. C.; Proposed Building for The Methodist Church, Whiteville, N. C.—Sept., pp. 106-108.
Baumann, Brother Cajetan, O.F.M. Article, "Some Trends in Church Design."—Sept., pp. 95-96.
Becket, Welton. See Wurdeman, Walter.
Berhampore Flats, Wellington, N. Z. New Zealand Dept. of Housing Construction—Oct., pp. 80-82.
Berla and Abel, archts. The Winchester-Tewksbury, Washington, D. C.—Oct., p. 92.
Bieberbach, M. W., archt. Torresdale Pumping Station for city of Philadelphia—July, p. 100; Administration Bldg., Philadelphia Water Works Improvement—July, p. 101.
Beidler, Paul, archt. Kirkridge Chapel, Delaware Water Gap, Pa.—Sept., p. 93.
Berbusse, Wm. A., Jr., Inc., gen. con. See Lawrie & Green.
Berlage, H. P., archt. Christian Science Church, The Hague, Holland—Sept, p. 85.
Bloch, Ben C. Article, "Notes on Postwar Synagogue Design."—Sept., pp. 104-105.
Bloch and Hesse, archts. Temple Beth El, Great Neck, L. I.—Sept., p. 104; Proposed synagogue for N. Y. C.—Sept., p. 105.
Blumberg, Harry. Article, "Hospital Food Service."—Aug., p. 115.
Bogner, Walter F. The Postwar House—Dec., pp. 89-102.
Bohm, Dominikus, archt. Chapel at Nordernen, Germany—Sept., p. 87.
Bourgeois, Louis J., archt. Baha'i Temple, Wilmette, Ill.—Sept., p. 112.
Brookman, Herman, archt. House for Mr. and Mrs. Henry Feldman, Portland, Ore.—Nov., pp. 80-81; House for Dr. and Mrs. Laurence Selling, Portland, Ore.—Nov., pp. 82-83.
Brown, Arthur T., archt. Three postwar houses—Dec., pp. 72-73.
Buckler and Fenhagen, archts.; Charles F. Neergaard, consult. Arlington Hospital, Arlington, Va.—Aug., pp. 104-106.
Burckhardt, Ernst. See Egender, K.
Burns, House for Mr. P. V., Fort Lauderdale, Fla. Igor B. Polevitsky, archt.—Nov., p. 70.

C

Carr, J. Gordon. See Cross and Cross, archts.
Chapel at Nordernen, Germany (photo). Dominikus Bohm, archt.—Sept., p. 87.
Chapel for Methodist Church, Lake Junaluska, N. C. Barber & McMurry, archts.—Sept., p. 107.
Chicago, Burlington & Quincy Station, Burlington, Iowa. Holabird & Root, archts.—Oct., pp. 54-59.
Children's Hospital, Mexico City. Jose Villagran Garcia, archt.—Oct., pp. 60-67.
Christian Reformed Church, Proposed building for. Whitney R. Smith, archt.—Sept., p. 99.
Christian Science Church, The Hague, Holland (photo). H. P. Berlage, archt.—Sept., p. 85.
Church and community center, Hillsboro, Ore. Sutton, Whitney & Aandahl, archts.—Sept., p. 103.
Church of the Guardian Angels, Hastings, Minn. Hills, Gilbertson & Hayes, archts.—Sept., pp. 95-97.
Church at Kiefhock Housing Project, Rotterdam, Holland. J. J. P. Oud, archt.—Sept., p. 88.
Church Management. Architectural Record collaboration with. See CHURCHES.
Church Plan for Research. Barber & McMurry, archts.—Sept., p. 107.
Church Property Administration. Architectural Record collaboration with. See CHURCHES.
Church and Rectory of Our Lady of Refuge, Brooklyn, N. Y. Henry V. Murphy, archt.—Sept., p. 111.
Church of St. Athanasius Parish, Bay Parkway, N. Y. Henry V. Murphy, archt.—Sept., p. 111.
Church of St. Francis of Assisi, Rochester, Minn. Hills, Gilbertson & Hayes, archts.—Sept., p. 94.
CHURCHES. BTS #93. Collaborative study with Church Management and Church Property Administration—Sept., pp. 83-112.
City hall for a growing community. Skidmore, Owings and Merrill, archts.—July, pp. 92-95.
Civic Center for Detroit. See Lodge, John C., Expressway.
Clas, A. R.; Maginnis & Walsh, archts. "The Netherlands." Washington, D. C.—Oct., pp. 78-79.
Clinic and residence for Dr. W. A. Coole, Houston, Texas. Mackie and Kamrath, archts.—July, pp. 78-80.
Closets. See Household Closets.
Confer, Frederick L. R., archt.; Ned S. Rucker, landscape archt. House for Mr. T. C. Ingersoll, Orinda, Cal.—Dec., pp. 74-75.
Cornell University, Ithaca, N. Y. Olin Hall of Chemical Engineering. Shreve, Lamb and Harmon, archts.—Aug., pp. 66-73.
"Correlating the Public Health Center With the Community General Hospital." Article by Joseph Mountin—Aug., pp. 81-82.
Court House, Dauphin County. See Dauphin County Court House.
Cross and Cross, archts.; J. Gordon Carr, designer of interiors; Clifton Smith and Edward B. Silverman, electrical engnrs. for lighting installation. Tiffany's, N. Y.—Nov., p. 103.
Curtiss-Wright Aircraft Plant, Columbus, Ohio. Albert Kahn Assoc. Archts. & Engnrs., Inc.—Nov., pp. 84-89.

D

Dalzell, Kenneth W., archt. Carteret Village, Orange, N. J.—Oct., pp. 86-87.
d'Andrade, H. E. See "The Lighting of Merchandise."
Darin & Armstrong Co., gen. con. See Kahn, Albert, Assoc. Archts. & Engnrs., Inc.
Dauphin County Court House, Harrisburg, Pa. Lawrie and Green, archts.—Sept., pp. 62-75.
De Felice, T. See Proposed Plan for Multi-Service Cleaning Plant; Sketches for "The Lighting of Merchandise."—Nov., pp. 102-103.
DeGraaff, House for Mr. and Mrs. W. H., Portland, Ore. Van Evera Bailey, archt.—Nov., pp. 64-67.
"Department Store Air Conditioning." Article by Alfred L. Jaros, Jr.—Nov., p. 97.
Department Store Economist. Architectural Record collaboration with. See DEPARTMENT STORES.
Department Store, Petaluma, Cal. Hertzka and Knowles, archts.—Nov., pp. 98-99.
DEPARTMENT STORES. BTS #95. Collaborative study with Department Store Economist—Nov., pp. 90-108.
Department Stores, Elevators for. See Elevators for Department Stores.
"Design Your City's Buildings Now!" Article by A. Gordon Lorimer, A.I.A.—July, pp. 88-91.
"Designing the Postwar Laundry." Article by Noel Grady; Projects designed by Irving M. Fenichel, archt.—Oct., pp. 94-99.
DeYoung, Moscowitz and Rosenberg, archts. Gilchrist's, Boston——Nov., p. 107; Two typical floor plans of proposed apartment buildings, N. Y. C.—Oct., pp. 72-73.
Diplomat Apartments, Washington, D. C. Joseph H. Abel, archt.—Oct., p. 75.
Distin, William G., archt. Proposed town hall for Town of Altamont, Tupper Lake, N. Y.—July, p. 98.
Ditchy, Clair W., archt. Proposed municipal garage for Royal Oak, Mich.—July, p. 106.
Dreyer, Rolf C., archt. Town halls for Red Hook, N. Y. and Pine Plains, N. Y.—July, p. 96.

E

Edmunds, James R., archt.; Rudolph, Cook and Van Leeuwen, Inc., assocs. Norfolk County Hospital, Portsmouth, Va.—Aug., p. 99.
Egender, K. and Ernst Burckhardt, archts. St. Johannes Kirche, Basle, Switzerland—Sept., p. 86.
Elevators for Department Stores. Summary from "Department Store Designs" by Starrett and van Vleck, archts. TSS—Nov., pp. 109-110.
Emergency Operations Section of the Public Buildings Administration. See "Hospitals that Meet the Emergency."
Evans, Randolph. Article, "House Design for the Mass Market."—Nov., pp. 74-79.

F

Feldman, House for Mr. and Mrs. Henry, Portland, Ore. Herman Brookman, archt.—Nov., pp. 80-81.
Fenichel, Irving M., archt. See "Designing the Postwar Laundry."
Fire House for Princeton, N. J., Proposed. Shirley W. Morgan, archt.—July, pp. 104-105.
Fire House, Proposed, Grand Rapids, Mich. Roger Allen, archt.—July, p. 103.
First Reformed Presbyterian Church, Proposed Building for, Los Angeles, Cal. Walter L. Reichardt, archt.—Sept., pp. 92-93.
519 East 86th St., N. Y. C. Arthur Weiser, archt.—Oct., p. 90.
Frauenfriedenskirche, Frankfurt-am-Main, Germany (photo). Hans Herkommer, archt.—Sept., p. 87.

G

Garage, proposed municipal, for Royal Oak, Mich. Clair W. Ditchy, archt.—July, p. 106.
Garcia, Jose Villagran, archt. Children's Hospital, Mexico City—Oct., pp. 60-67.
Gardner, Dr. Henry A. See "Postwar Paint."
GENERAL HOSPITAL, THE. BTS #92. Collaborative study with The Modern Hospital—Aug., pp. 77-116.
Giffels & Vallet, Inc., L. Rossetti, Assoc. Engnrs. & Archts. Highway and civic center project for Detroit—Dec., pp. 84-88.
Gilchrist's, Boston (before-and-after plans). De Young, Moscowitz and Rosenberg, archts.—Nov., p. 107.
Grady, Noel. Article, "Designing the Postwar Laundry."—Oct., pp. 94-99.
Gropius, Walter, archt. Expansible prefab house for postwar—Dec., p. 69.

H

Hall, House for Mr. and Mrs. C. J. Arthur T. Brown, archt.—Dec., p. 75.
Hallett, R. L. See "Postwar Paint."

Harlem Welfare Center, Proposed, for N. Y. C. Dept. of Welfare (photo). N. Y. C. Dept. of Architecture—July, p. 90.
Hartman, House for, Mr. and Mrs. Jess, Allison Island, Miami Beach, Fla. Igor B. Polevitsky, archt.—Nov., pp. 68-69.
"Health Services and City Planning." Article by Edwin A. Salmon—Aug., pp. 79-80.
Heap, Robison, archt. Proposed Plan for Mull-Service Cleaning Plant—Oct., pp. 100-101.
Hein, Peter L. See "Hospitals that Meet the Emergency."
Herkommer, Hans, archt. Frauenfriedenskirche, Frankfurt-am-Main, Germany—Sept., p. 87.
Hertzka and Knowles, archts. Department store, Petaluma, Cal.—Nov., pp. 98-99.
Highway and civic center project for Detroit. See Lodge, John C., Expressway.
Hills, Gilbertson & Hayes, archts. Church of St. Francis of Assisi, Rochester, Minn.—Sept., p. 94; Church of the Guardian Angels, Hastings, Minn.—Sept., pp. 95-97.
Hochschild Kohn's (renderings and plans), Baltimore, Md. Kenneth C. Welch, cons. archt.—Nov., p. 95.
Holabird & Root, archts. Chicago, Burlington & Quincy Station, Burlington, Iowa—Oct., pp. 54-59.
Hollywood Hotel, Proposed, Las Vegas, Nev. Walter Wurdeman and Welton Becket, archts.—Aug., pp. 74-76.
Holy Cross Chapel, Stockholm, Sweden (photo). E. Gunnar Asplund, archt.—Sept., p. 84.
Holy Name Church, Fall River, Mass. (photo). Maginnis and Walsh, archts.—Sept., p. 89.
"Hospital Building Program, The." Article by C. W. Munger, M. D.—Aug., pp. 92-93, 146.
Hospital, Children's. See Children's Hospital.
Hospital Facilities Section, U. S. Public Health Service. See "Hospitals that Meet the Emergency," and Kitchens, 50-Bed Hospital.
Hospital, 55-bed general. Schmidt, Garden and Erikson, archts.—Aug., p. 83.
"Hospital Food Service." Article by Harry Blumberg—Aug., p. 115.
Hospital, general, for a small community. Schmidt, Garden and Erikson, archts.—Aug., p. 114.
Hospital, The General. See GENERAL HOSPITAL, THE.
"Hospital Materials and Equipment." Article by Alexander C. Robinson, III, F.A.I.A.—Aug., pp. 94-96.
Hospital for Prince Georges County, Md. Kea, Ross & Walton, archts.—Aug., pp. 107-109.
"Hospitals that Meet the Emergency." Portfolio of hospitals designed by private architects in collaboration with the Hospital Facilities Section, U. S. Public Health Service, Marshall Shaffer, Chief Architect, and the Emergency Operations Section of the Public Buildings Administration, Peter L. Hein, Engineer Advisor-in-Charge—Aug., pp. 99-114.
"House Design for the Mass Market." Article by Randolph Evans—Nov., pp. 74-79.
Household Closets. Research by Larch Renshaw, A.I.A. TSS—Part III, Sept., pp. 113-114; Part IV, Dec., pp. 103-104.
Houses. Mr. P. V. Burns, postwar—Nov., p. 70; Dr. W. A. Coole—July, pp. 78-80; Mr. and Mrs. W. H. DeGraaf—Nov., pp. 64-67; Expansible prefab for postwar—Dec., p. 69; Mr. and Mrs. Henry Feldman—Nov., pp. 80-81; For seaside living—Dec., p. 68; Mr. and Mrs. C. J. Hall, proposed—Dec., p. 73; Mr. and Mrs. Jess Hartman, proposed—Nov., pp. 68-69; Mr. T. C. Ingersoll—Dec., pp. 74-75; Mr. and Mrs. J. W. McCutcheon, proposed—Dec., p. 72; Mr. James W. Minick—July, pp. 66-71; Willard and Barbara Morgan—Sept., pp. 76-79; Mr. and Mrs. Malcolm G. Munn, proposed—Dec., p. 73; Postwar design in Mass.—July, pp. 76-77; Postwar House, The—Dec., pp. 89-102; Mr. and Mrs. T. Trip Russell—July, pp. 72-75; Dr. and Mrs. Laurence Selling—Nov., pp. 82-83; Three postwar houses—Dec., pp. 70-71; Mr. and Mrs. Titus—July, pp. 81-83; Mr. and Mrs. James Ward—Dec., pp. 76-77; Mr. John R. Weber—Sept., pp. 80-82.
Hudnut, Joseph. Article, "Picture, Sentiment, and Symbol."—Sept., pp. 84-88.

I

Immanuel Baptist Church, Knoxville, Tenn. Barber & McMurry, archts.—Sept., p. 106.
Incinerator plant, proposed, Hamden, Conn. Westcott & Mapes, Inc., archts.—July, p. 102.
Ingersoll, House for Mr. T. C., Orinda, Cal. Frederick L. R. Confer, archt.—Dec., pp. 74-75.
Instituto Nacional Politecnico Superior, Lima, Peru. Moore and Hutchins, archts.—July, pp. 84-86.

J

Jamaica West Health Sub-Station, Proposed, for N. Y. C. Dept. of Health (photo). N. Y. C. Dept. of Architecture—July, p. 89.
Jandl, Henry A. See Morgan, Sherley W., archt.
Jaros, Alfred L., Jr. Article, "Department Store Air Conditioning."—Nov., p. 97.
Jennewein, C. Paul. Marble and bronze sculptures in Dauphin County Court House—Sept., pp. 62-75.
Jewelry store lighting installation (photo). Morris Lapidus, archt.—Nov., p. 105.

K

Kahn, Albert, Assoc. Archts. & Engnrs., Inc.; Darin & Armstrong Co., gen. con. Curtiss-Wright Aircraft Plant, Columbus, Ohio—Nov., pp. 84-89.
Kauffman's, Pittsburgh, Pa. (photos). Kenneth C. Welch, cons. archt.—Nov., pp. 92-94.
Kea, Ross & Walton, archts.; Charles F. Neergaard, consult. Hospital for Prince Georges County, Md.—Aug., pp. 107-109.
Keally, Francis. See "The Lighting of Merchandise."
Keck, George Fred, archt. Three postwar houses—Dec., pp. 70-71.
Kings County Hospital, proposed tuberculosis and chronic disease pavilion, N. Y. C. (photo)—Aug., p. 79.
Kirkridge Chapel, Delaware Water Gap, Pa. Paul Beidler, archt.—Sept., p. 98.
Kitchens, 50-Bed Hospital. Summary of recommendations as developed by the technical staff of the Hospital Facilities Section of the U. S. Public Health Service——Marshall Shaffer, Hospital Architect and Neil F. MacDonald, consult. TSS—Aug., pp. 117-118.
Kuznetsov, Grigory, Article, "Russia Plans for Rebuilding."—Aug., pp. 120, 122.

L

Landfair Apartments, West Los Angeles, Cal. Richard J. Neutra, archt.—Oct., p. 91.
Lapidus, Morris, archt. Jewelry store—Nov., p. 105; Men's clothing dept. of a store in Brooklyn—Nov., pp. 100-101.
LAUNDRIES—POSTWAR, PREWAR. BTS #94. Collaborative study with Starchroom Laundry Journal—Oct., pp. 93-104.
Laundry on the Drive-in Plan—Oct., pp. 100-101.
Laundry Equipment. TSS—Oct., pp. 105-108.
Lawrie and Green, archts.; Wm. A. Berbusse, Jr., Inc., gen. con.; Moody & Hutchison, mech. engnrs. Dauphin County Court House, Harrisburg, Pa.—Sept., pp. 62-75.
Lescher and Mahoney, archts. and engnrs. St. Monica's Hospital and Health Center, Phoenix, Ariz.—Aug., pp. 110-112.
Lighting for Churches. See "Requirements for Church Lighting."
"Lighting of Merchandise." With thanks to George Ainsworth, Chairman, IES Committee on Fundamental Standards of Quality and Quantity in Artificial Illumination; Francis Keally, A.I.A.; H. E. d'Andrade, G. E. Co.—Nov., pp. 102-103.
Lodge, John C., Expressway and civic center for Detroit. Giffels & Vallet, Inc., L. Rossetti, Assoc. Engnrs. & Archts.—Dec., pp. 84-88.
Loewy, Raymond, designer. Bamberger's, Newark—Nov., p. 104.
Long, J. S. See "Postwar Paint."
Lorimer, A. Gordon. Article, "Design Your City's Buildings Now!"—July, pp. 88-91.
Lowry, John, Inc., builder. See Shreve, Lamb and Harmon.

M

MacDonald, Neil F. See Kitchens, 50-Bed Hospital.
MacKie and Kamrath, archts. Clinic and residence for Dr. W. A. Coole, Houston, Texas—July, pp. 78-80.
Maginnis, Charles D. Article, "Architecture and Religious Tradition."—Sept., pp. 89-91.
Maginnis and Walsh, archts. See Clas, A. R.; Holy Name Church, Fall River, Mass.; Our Lady Queen of Martyrs, Forest Hills, L. I.; Trinity College Chapel, Washington, D. C.—Sept., pp. 89-91.
Manufacturers' Postwar Plans. See Products for Postwar Plans—Statements from 255 Manufacturers.
Marshall Field's, Chicago (photos). See "Merchandising with Light," and "Vertical Transportation Axioms."
Marshall, John. See "Postwar Paint."
Mauger, Lewis. Article, "Planning for Lower Maintenance."—Oct., pp. 83-85.
McCandless, Stanley R. Article, "Merchandising with Light."—Nov., pp. 104-106.
McCutcheon, House for Mr. and Mrs. J. W. Arthur T. Brown, archt.—Dec., p. 72.
Men's clothing department of a store in Brooklyn. Morris Lapidus, archt.—Nov., pp. 100-101.
Mercantile National Bank Building, Dallas, Tex. Walter W. Ahlschlager, archt.——July, pp. 54-65.
"Merchandising with Light." Article by Stanley R. McCandless—Nov., pp. 104-106.
Merrill, W. Ralph, archt. Monarch Laundry, Dallas, Tex.—Oct., pp. 102-104.
Methodist Church, proposed building for the, Whiteville, N. C. Barber & McMurry, archts.—Sept., p. 108.
Minick, James W., archt.-owner. House at Camp Hill, Pa.—July, pp. 66-71.
Mitchell, Terry. Article, "Refrigeration and Air Conditioning."—Aug., pp. 97-98, 116.
Modern Hospital, The. Architectural Record collaboration with. See GENERAL HOSPITAL, THE.
Monarch Laundry, Dallas, Tex. W. Ralph Merrill, archt.—Oct., pp. 102-104.
Moody & Hutchison, mech. engnrs. See Lawrie and Green.
Moore and Hutchins, archts. Instituto Nacional Politecnico Superior, Lima, Peru—July, pp. 84-86.
Morgan, Sherley W., acht.; Henry A. Jandl, assoc. Proposed fire house for Princeton, N. J.—July, pp. 104-105.
Morgan, House for Willard and Barbara, Scarsdale, N. Y. John R. Weber, archt.—Sept., pp. 76-79.
Moscowitz, Benjamin. Article, "Planning for Maximum Income."—Oct., pp. 72-74.
Motion Picture Theater Auditorium, Acoustical Planning for the. See Acoustical Planning for the Motion Picture Theater Auditorium.
Mountin, Joseph. Article, "Correlating the Public Health Center with the Community General Hospital."—Aug., pp. 81-82.
Mulloy, Lou B. See Stone, Douglas Dacre.
Munger, C. W., M. D. Article, "The Hospital Building Program."—Aug., pp. 92-93, 146.
MUNICIPAL BUILDINGS. BTS # 91. Collaborative study with The American City—July, pp. 87-106.
Munn, House for Mr. and Mrs. Malcolm G. Arthur T. Brown, archt.—Dec., p. 73.
Murphy, Henry V., archt. Church of St. Athanasius Parish, Bay Parkway, N. Y.; Church and Rectory of Our Lady of Refuge, Brooklyn, N. Y.—Sept., p. 111.

N

Neergaard, Charles F., consult. See Buckler and Fenhagen, archts., and Kea, Ross & Walton, archts.
Neff, Wallace, archt. House for Mr. and Mrs. Titus, Goodyear Farms, Litchfield Park, Ariz.—July, pp. 81-83.
"Netherlands, The," Washington, D. C. A. R. Clas; Maginnis and Walsh, archts.—Oct., pp. 78-79.
Neutra, Richard J., archt. Landfair Apartments, West Los Angeles, Cal.—Oct., p. 91; P. Pfisterer, collaborator. House for Mr. and Mrs. James Ward, North Hollywood, Cal.—Dec., pp. 76-77.
N. Y. C. Bureau of Bridges. See Vernon Ave. Bridge and Viaduct, proposed.
N. Y. C. Dept. of Archit. Nightingale Hospital for N. Y. C. Dept. of Hospitals; Jamaica West Health Sub-Station for N. Y. C. Dept. of Health; Harlem Welfare Center, for N. Y. C. Dept. of Welfare; Sunset Park Health Center, Brooklyn, for N. Y. C. Dept. of Public Works; Proposed Vernon Ave. Bridge and Viaduct, for N. Y. C. Bureau of Bridges; 76th Precinct Police Station, for N. Y. C. Police Dept.; Newton Creek Sewage Treatment Works, N. Y. C.; 26th Ward Sewage Treatment Works, N. Y. C.—July, pp. 88, 89, 90, 91, 100, 101.
N. Y. C. Dept. of Health. See Jamaica West Health Sub-Station.
N. Y. C Dept of Hospitals See Nightingale Hospital
N. Y. C. Dept. of Public Works. See Sunset Park Health Center.
N. Y. C Dept of Welfare. See Harlem Welfare Center.
N. Y. C. Police Dept. See 76th Precinct Police Station.
Newton Creek Sewage Treatment Works, proposed (rendering), N. Y. C. Bureau of Archit.—July, p. 100.
New Zealand Dept. of Housing Construction. Berhampore Flats, Wellington, N. Z.—Oct., pp. 80-82.
Nightingale Hospital, proposed, for N. Y. C. Dept. of Hospitals (photo). N. Y. C. Bureau of Archit.—July, p. 88.
Norfolk County Hospital, Portsmouth, Va. James R. Edmunds, archt.—Aug., p. 99.
"Notes on Postwar Synagogue Design." Article by Ben C. Bloch—Sept., pp. 104-105.

O

"Office of Housing Research, The." Editorial by Kenneth K. Stowell—Aug., p. 65.
Olin Hall of Chemical Engineering, Cornell Univ. Ithaca, N. Y. Shreve, Lamb and Harmon, archts.——Aug., pp. 66-73.
Oud, J. J. P., archt. Church at Kiefhock Housing Project, Rotterdam, Holland—Sept., p. 88.
Our Lady Queen of Martyrs, Forest Hills, L. I. Maginnis and Walsh, archts.—Sept., p. 90.

P

Paint, postwar. See "Postwar Paint."
Pfisterer, P. See Neutra, Richard J.
Philadelphia Water Works Improvement, proposed administration building (photo). M. W. Bieberbach, archt.—July, p. 101.
"Picture, Sentiment, and Symbol." Article by Joseph Hudnut—Sept., pp. 84-88.
Pittsburg Community Hospital, Pittsburg, Cal. Douglas Dacre Stone and Lou B. Mulloy, archts.—Aug., p. 113.
"Plan Now—With Assurance." Editorial by Kenneth K. Stowell—Nov., p. 61.
"Planning for Lower Maintenance." Article by Lewis Mauger—Oct., pp. 83-85.
"Planning for Maximum Income." Article by Benjamin Moscowitz—Oct., pp. 72-74.
Polevitsky, Igor B., archt. Proposed house for Mr. and Mrs. Jess Hartman, Allison Island, Miami Beach, Fla.—Nov., pp. 68-69; Postwar house for Mr. P. V. Burns, Fort Lauderdale, Fla.—Nov., p. 70.
Polevitsky and Russell, archts. House for Mr. and Mrs. T. Trip Russell, Miami, Fla.—July, pp. 72-75.
Postwar Building Materials and Design, A Statement on. See Statement on Postwar Building Materials and Design, A.
"Postwar Designs for the Northwest." George Wellington Stoddard, archt.—Nov., pp. 71-73.
POSTWAR HOUSE, THE. BTS #96. Walter F. Bogner—Dec., pp. 89-102.

"Postwar Paint." Four authorities answer questions at open informal "panel discussion" sponsored by the Technical Committee of N. Y. Chapter, A.I.A. J. S. Long, Dr. Henry A. Gardner, R L. Hallett, and John Marshall—Oct., pp 68-70, 134, 136.
"Postwar Quantity and Quality." Editorial by Kenneth K. Stowell—Sept., p. 61.
Potwin, C. C. See Acoustical Planning for the Motion Picture Theater Auditorium.
Prefabricated house for postwar, expansible. Walter Gropius, archt.—Dec., p. 69.
Prince George Apartments, Hyattsville, Md. Joseph H. Abel, archt.—Oct., pp. 76-77.
Products for Postwar Plans—Statements from 255 Manufacturers—Dec., pp. 58-67.
"Progress Report—The Evolution of Miracles." Editorial by Kenneth K. Stowell—Dec., p. 57.
Proposed Plan for Multi-Service Cleaning Plant. Robison Heap, archt. Sketches by T. De Felice —Oct., pp. 100-101.

R

Rambusch, Edward. Article, "Requirements for Church Lighting."—Sept., pp. 109-110, 132.
"Refrigeration and Air Conditioning." Article by Terry Mitchell, M. E.—Aug., pp. 97-98, 116.
Reichardt, Walter L., archt. Proposed building for First Reformed Presbyterian Church, Los Angeles, Cal.—Sept., pp. 92-93.
Renshaw, Larch. Research for Household Closets, Part III—Sept., pp. 113-114; Part IV—Dec., pp. 103-104.
"Requirements for Church Lighting." Article by Edward Rambusch, I. E.—Sept., pp. 109-110, 132.
Riverside Church, N. Y. C. (photos)—Sept., p. 109.
Robinson, Alexander C., III. Article, "Hospital Materials and Equipment."—Aug., pp. 94-96.
Robinson, George Ernest, archt. West Roxbury Fire Station, Boston—July, p. 105.
Rogers, Tyler Stewart, Chairman, Technical Committee of The Producers' Council, Inc. A Statement on Postwar Building Materials and Design —Nov., pp. 62-63.
Rossetti, L. See Gilbois & Vallet, Inc.
Rucker, Ned S., landscape archt. See Confer, Frederick L. R.
Rudolph, Cook and Van Leeuwen, Jnc. See Edmunds, James R.
Russell, House for Mr. and Mrs. T. Trip, Miami, Fla. Polevitsky and Russell, archts.—July, pp. 72-75.
"Russia Plans for Rebuilding." Article by Grigory Kuznetsov—Aug., pp. 120, 122.

S

St. Johannes Kirche, Basle, Switzerland (photo). K. Egender and Ernst Buckhardt, archts.—Sept., p. 86.
St. Monica's Hospital and Health Center, Phoenix, Ariz. Lescher and Mahoney, archts, and engnrs. —Aug., pp. 110-112.
Salmon, Edwin A. Article, "Health Services and City Planning."—Aug., pp. 79-80.
Schlanger, B. See Acoustical Planning for the Motion Picture Theater Auditorium.
Schmidt, Garden and Erikson, archts. 55-bed general hospital—Aug., p. 83; General hospital for a small community—Aug., p. 114.
Schoen, Eugene and Lee, archts. Walk-Over Shoe Store, N. Y.—Nov., p. 102.
School of Engineers for Peru, National. See Instituto Nacional Politecnico Superior.
Schurko, John, designer. See Welch, Kenneth C.
Selling, House for Dr. and Mrs. Laurence, Portland, Ore. Herman Brookman, archt.—Nov., pp. 82-83.
76th Precinct Police Station, proposed, for N. Y. C. Police Dept. (photo). Bureau of Archit.—July, p. 91.
Sewage treatment. See Newton Creek Sewage Treatment Works—July, p. 100; 26th Ward Sewage Treatment Works—July, p. 101.
Shaffer, Marshall. See "Hospitals that Meet the Emergency," and Kitchens, 50-Bed Hospital.
Shreve, Lamb and Harmon, archts.; John Lowry, Inc., builder. Olin Hall of Chemical Engineering, Cornell Univ., Ithaca, N. Y.—Aug. pp. 66-73.
Sigstedt, Thorsten. Wood carvings in Dauphin County Court House—Sept., pp. 62-75.
Silverman, Edward B. See Cross and Cross, archts.
Skidmore, Owings and Merrill, archts. City Hall for a growing cummunity—July, pp. 92-95.
"Small Houses in a Large Way." Editorial by Kenneth K. Stowell—Oct., p. 53.
Smith, Clifton and Edward B. Silverman. See Cross and Cross, archts.
Smith, Whitney R., archt. Proposed building by Christian Reformed Church—Sept., p. 99.
"Some Trends in Church Design." Article by Brother Cajetan Baumann, O.F.M.—Sept., pp. 95-96.
Staff house for physicians, proposed, Riker's Island, N. Y. C. (photo). Frederick L. Ackerman, archt.—July, p. 89.
Starchroom Laundry Journal. Architectural Record collaboration with. See LAUNDRIES—POSTWAR, PREWAR.
Statement on Postwar Building Materials and Design, A. By the Technical Committee of The Producers' Council, Inc. Tyler Stewart Rogers, Chairman—Nov., pp. 62-63.
Starrett and Van Vleck, archts. Elevators for department stores. TSS—Nov., pp. 109-110.
Stoddard, George Wellington, archt. "Postwar Designs for the Northwest."—Nov., pp. 71-73.
Stone, Douglas Dacre and Lou B. Mulloy, archts. Vallejo Community Hospital, Vallejo, Cal.—Aug., pp. 100-103; Pittsburg Community Hospital, Pittsburg, Cal.—Aug., p. 113.
Stowell, Kenneth K. Editorials: "The Office of Housing Research."—Aug., p. 65; "Plan Now—With Assurance."—Nov., p. 61; "Postwar Quantity and Quality."—Sept., p. 61; "Progress Report—The Evolution of Miracles."—Dec., p. 57; "Small Houses in a Large Way."—Oct., p. 53; "Triumphant War Memorials."—July, p. 53.
Sunset Park Health Center, proposed, Brooklyn, for N. Y. C. Dept. of Public Works (photo). N. Y. C. Dept. of Archit—July, p 90
Sutton, Whitney & Aandahl, archts. Church and community center, Hillsboro, Ore.—Sept., p. 103.
Synagogue Design. See "Notes on Postwar Synagogue Design."
Synagogue, proposed, for N. Y. C. Bloch and Hesse, archts.—Sept., p. 105.

T

Technical Committee of N. Y. Chapter, A.I.A. See "Postwar Paint."
Temple Beth El, Great Neck, L. I. (photo). Bloch and Hesse, archts.—Sept., p. 104.
Thielbar and Fugard, archts. Wesley Memorial Hospital, Chicago—Aug., pp. 84-91.
Thiry, Paul, archt. House of ideas for seaside living —Dec., p. 68.
Three Postwar Houses. Arthur T. Brown, archt.—Dec., pp. 72-73.
Three Postwar Houses. George Fred Keck, archt.—Dec., pp. 70-71.
Tiffany's, N. Y. (photo). Cross and Cross, archts.—Nov., p. 103.
Titus, House for Mr. and Mrs., Goodyear Farms, Litchfield Park, Ariz., Wallace Neff, archt.—July, pp. 81-83.
Torresdale Pumping Station, proposed, for City of Philadelphia (photo). M. W. Bieberbach, archt. —July, p. 100.
Town hall, postwar, Pine Plains, N. Y. Rolf C. Dreyer, archt.—July, p. 97.
Town hall, postwar, Red Hook, N. Y. Rolf C. Dreyer, archt.—July, p. 96.
Town hall, proposed, for Town of Altamont, Tupper Lake, N. Y. William G. Distin, archt.—July, p. 98.
Transportation in department stores, vertical. See "Vertical Transportation Axioms." Nov., pp. 107-108.
Trinity College Chapel, Washington, D. C. (photos). Maginnis and Walsh, archts.—Sept., pp. 89, 91.
"Triumphant War Memorials." Editorial by Kenneth K. Stowell—July, p. 53.
26th Ward Sewage Treatment Works, proposed, N. Y. C. (photo). Bureau of Archit.—July, p. 101.
Tyler, Hugh. Glass carvings in Dauphin County Court House—Sept., pp. 62-75.

V

Vallejo Community Hospital, Vallejo, Cal. Douglas Dacre Stone and Lou B. Mulloy, archts.—Aug. pp. 100-103.
Vernon Ave. Bridge and Viaduct, proposed, for N. Y. C. Bureau of Bridges (photo). Bureau of Archit. —July, p. 91.
"Vertical Transportation Axioms." Things to do and not to do in department store practice—Nov., p. 107-108.

W

Walk-Over Shoe Store, N. Y. (photo). Eugene and Lee Schoen, archts.—Nov., p. 102.
War memorial. See American Legion Memorial Building.
Warchavchik, Gregori, archt. Apartment house in Sao Paulo, Brazil—Oct., pp. 88-89.
Ward, House for Mr. and Mrs. James, North Hollywood, Cal. Richard J. Neutra, archt.—Dec., pp. 76-77.
Water works. See Torresdale Pumping Station; Philadelphia Water Works Improvement.
Weber, John R., archt. House for Willard and Barbara Morgan, Scarsdale, N. Y.—Sept., pp. 76-79; House for John R. Weber, Scarsdale, N. Y.—Sept., pp. 80-82.
Welch, Kenneth C. Article, "Where Are Department Stores Going?"—Nov., pp. 91-96; con. archt. Hochschild Kohn's, Baltimore, Md.—Nov., p. 95; con. archt., John Schurko, designer, Kaufman's, Pittsburgh, Pa.—Nov., pp. 92-94.
Weiser, Arthur, archt. 519 E. 86th St., N. Y. C.—Oct., p. 90.
Wenner and Fink, archts Postwar plan for Asbury-First Methodist Church, Rochester, N. Y.—Sept., pp. 100-102.
Wesley Memorial Hospital, Chicago. Thielbar and Fugard, archts.—Aug., pp. 84-91.
Westcott & Mapes, Inc., archts. and engnrs. American Legion Memorial Building, Hamden, Conn. —July, p. 99; Proposed incinerator plant. Hamden, Conn.—July, p. 102.
West Roxbury Fire Station, Boston. George Ernest Robinson, archt.—July, p. 105.
"Where Are Department Stores Going?" Article by Kenneth C. Welch—Nov., pp. 91-96.
Winchester-Tewksbury, The, Washington, D. C. Berla and Abel, archts.—Oct., p. 92.
Wurdeman, Walter and Welton Becket, archts. Proposed Hollywood Hotel, Las Vegas, Nevada—Aug., pp. 74-76.

BOOKS REVIEWED

AIR CONSERVATION ENGINEERING. G. S. Dauphinee, F. H. Munkelt and H. Sleik, eds.—Dec., pp. 122, 124.
AIRPORT ENGINEERING. By H. Oakley Sharp, G. Reed Shaw and John A. Dunlop—Dec., p. 120.
AMERICAN SCHOOL AND UNIVERSITY, THE. A Yearbook, 16th Ed. Amer. School Pub. Corp.—Sept., pp. 28, 30.
ARCHITECTURE AND DESIGN. Div. of Archit. and Engin., State of Ill.—Sept., pp. 26, 28.
ARTS AND RELIGION, THE. Albert E. Bailey, Ed.—Oct., p. 26.
BUILDINGS AND EQUIPMENT FOR ARCHIVES. Bulletins of the Natl. Archives—Oct., p. 28.
BUILT IN USA, 1932-1944. Museum of Modern Art —Sept., p. 26.
CITIES OF LATIN AMERICA. By Francis Violich—Aug., p. 26.
COMMUNITY DEVELOPMENT. Through an Exposition for Los Angeles. By Samuel E. Lunden—July, pp. 28, 30.
DECORATIVE ARTS IN THE NETHERLANDS. By Paul Bromberg—July, pp. 26, 28.
DENSITIES IN NEW YORK CITY. Report of the Committee on City Planning and Zoning. Citizens' Housing Council—July, p. 124.
ECONOMIC STATUS OF THE NEW YORK METROPOLITAN REGION IN 1944. Regional Plan Ass'n., Inc.—Dec., p. 124.
ENJOYMENT OF THE ARTS, THE. Max Schoen, Ed —Sept., p. 26.
HANDBOOK OF MAP SYMBOLS. Department of Commerce, Albany, N. Y.—Nov., p. 114.
HOSPITAL COLOR AND DECORATION. By Raymond P. Sloan—Aug., p. 26.
HOUSE CONSTRUCTION. Postwar Building Studies No. 1. British Information Services—Aug., pp. 26, 28.
HOUSING YEARBOOK: 1944. Natl. Assoc. of Housing Officials—Sept., p. 28.
INSULATION AND YOUR HOME. By Arthur McK Stires—Oct., pp. 28, 30.
LIST OF INSPECTED ELECTRICAL EQUIPMENT. Underwriters' Laboratories, Inc.—Aug., p. 28
McMICHAEL'S APPRAISING MANUAL. By Stanley L. McMichael—Aug., p. 30.
MANUAL OF POSTWAR PLANNING. For Cities and Towns in Rhode Island. R. I. State Planning Board—Nov., p. 116.
METHODS OF BUILDING IN THE U.S.A. Report of a Mission appointed by the Minister of Works—July, p. 26.
MODERN CITY, THE. By Ladislas Segoe—July, pp. 30, 124.
NEED FOR URBAN REDEVELOPMENT LEGISLATION IN CALIFORNIA, THE. Town Hall, Los Angeles —Aug., pp. 32, 142.
NEIGHBORHOOD DESIGN AND CONTROL. An Analysis of the Problems of Planned Subdivisions. By Henry S. Churchill—Oct., p. 118.
NEW ARCHITECTURE AND CITY PLANNING. A Symposium, Paul Zucker, ed.—Dec., p. 106.
PATRICK GEDDES. Maker of the Future. By Philip Boardman—Nov., pp. 112, 114.
PILE-DRIVING HANDBOOK. By Robert D. Chellis—Nov., pp. 114, 116.
PLAN FOR PUBLIC RECREATIONAL AREAS, ST LOUIS, MO. City Plan Com.—Aug., p. 142.
PLANNING BEAVER COUNTY, PA. 1943. An Analysis of Existing Conditions and Potential Development. By Michael Baker, Jr.—Oct., p. 26.
PLANNING CLEVELAND IN 1943. City Planning Commission—Oct., p. 118.
PLANNING OUR NEW HOMES. Report by the Scottish Housing Advisory Committee—Sept., p. 26.
PLANNING OPPORTUNITIES FOR TOWNS IN ILLINOIS. By Karl B. Lohmann—Aug., p. 32.
PLANNING FOR THE SMALL AMERICAN CITY. Russell Van Nest Black—Sept., p. 30.
POSTWAR PLANNING AND HOUSING. N.Y.S. Assn. of Real Estate Boards, Inc.—Oct., pp. 32, 116.
PRACTICAL DESIGN FOR ARC WELDING. By Robert E. Kinkead—Oct., p. 30.
PRINCIPAL IN THE MODERN ELEMENTARY SCHOOL, THE. By Robt. Hill Lane—Dec., p. 122.
PROCEEDINGS OF THE NATIONAL CONFERENCE ON POSTWAR HOUSING. Natl. Com. on Housing, Inc.—July, p. 28.
REPORT OF THE ACTING STATE COMMISSIONER OF HOUSING TO THE GOVERNOR AND THE LEGISLATURE OF THE STATE OF NEW YORK. By Ira S. Robbins—Aug., pp. 30, 32.
ROMAN TOWNS. By Ernest Nash—July, p. 26.
SAINT LOUIS. 28th Annual Report of the City Plan Commission—Oct., p. 118.
SEAMLESS STEEL TUBE DATA. Seamless Steel Tube Institute—Nov., p. 116.
SMITHSONIAN INSTITUTION, THE. Annual Report of the Board of Regents for the year 1943—Dec., p. 124.
SOME BASIC REDEVELOPMENT PROBLEMS. By the Committee on Civic Design and Development, N. Y. Chapter, A.I.A.—Aug., pp. 30, 32.
TECHNIQUE OF THE TERRAIN, THE. Maps and Their Use in the Field in Peace and War. By H. A. Musham—Nov., p. 114.
THREE LECTURES ON ARCHITECTURE. By Eric Mendelsohn—July, p. 26.
TOWARD A POSTWAR HOUSING PROGRAM. The Producers' Council, Inc.—Nov., p. 114.
WASHINGTON: A PLANNED CITY IN EVOLUTION. By Maj. Gen. Ulysses S. Grant, 3d—July, p. 30.
WORKERS' HOUSING IN PUERTO RICO. By Jacob Crane—Oct., p. 116.